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When we have the stars?*



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THE
PHOTO-BEACON

A JOURNAL DEVOTED TO

PHOTOGRAPHY

IN ALL ITS PHASES.

VOLUME XVII.

1905.

"LET THERE BE LIGHT."

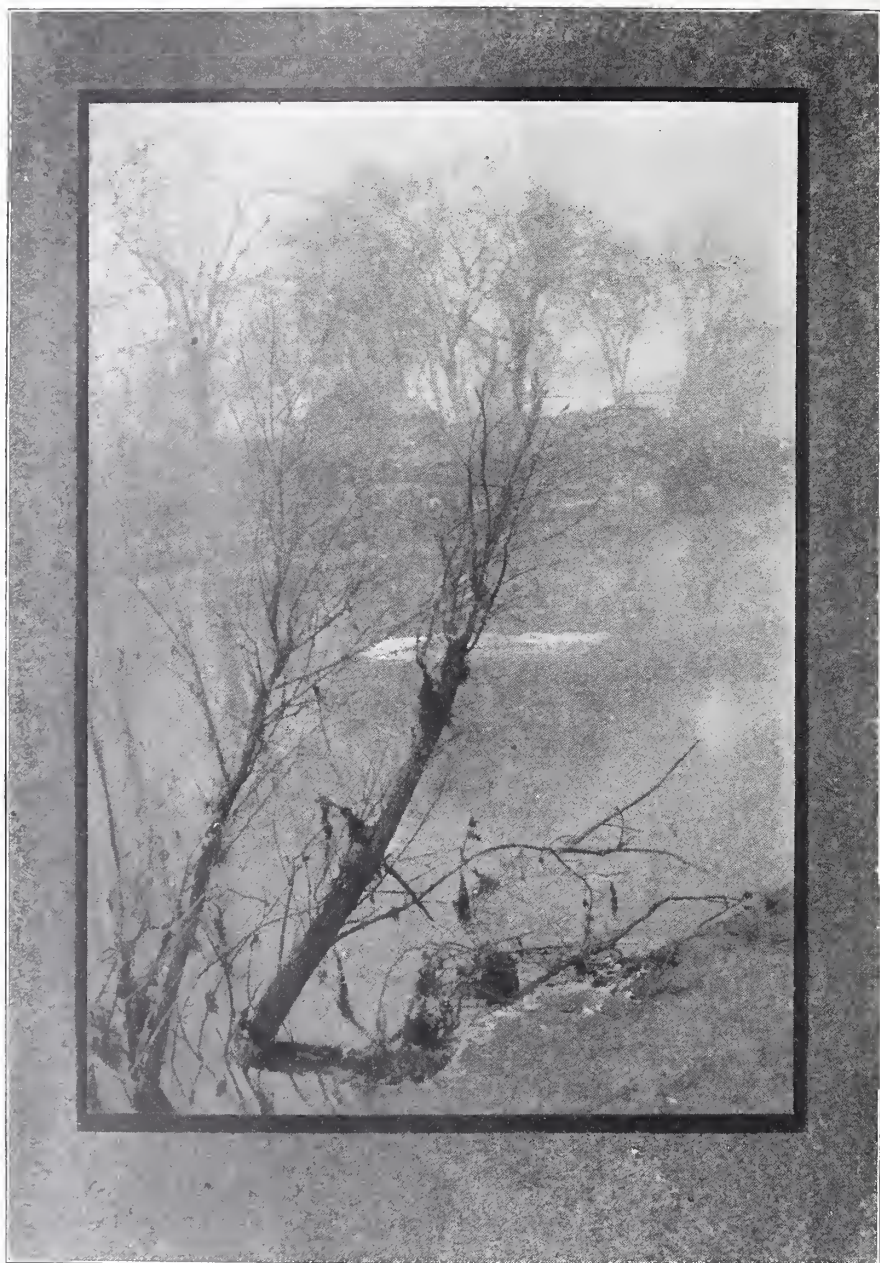
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Louis Fleckenstein,

FIRST PRIZE.

Faribault, Minn.

THE PHOTO-BEACON.

EDITED BY F. DUNDAS TODD.

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No. 1.

DETAIL.

Coming home from the office one day, I found both my little girls at the depot to meet me, and when I got within hearing distance the elder started off as follows: "The brown hen has hatched out twelve chickens. She was sitting on twelve eggs and every one of them has hatched out; not one of them is rotten; every one of them hatched, and from the twelve eggs we have got twelve little chickens." Of course I was delighted to receive the information, but inwardly I smiled very broadly at the repetition of detail. My readers will notice that the child simply reveled in the variety of ways she informed me that every egg had hatched out and how much importance she placed upon detail. Now this is very childlike, and her procedure was not at all different from that of any other child. In our earlier years, facts are exceedingly interesting and all young people simply delight in becoming acquainted with them, and as soon as they become familiar with a particular fact they simply can not be at rest until they have told everybody else everything about it that they happen to know.

As far as I can judge, this trait is very persistent with every individual until the age of manhood is reached; then, in well-developed minds, there is aroused a desire to become acquainted with principles—that is to say, a wish to know the laws that govern the fact. As we grow older, principles become

more and more interesting and facts take a very secondary place in our estimation. We find that principles are eternal, while facts are very evanescent, and so the latter cease to be interesting in themselves and become only of value as they illustrate the working of law. I am sorry to say that at present the majority of the human race never seem to get beyond the childhood stage in this particular respect. Conception of law never having dawned upon them, they still revel in facts and so become evolved into gossips, who are adults with the mental development or lack of development of a child.

As I have frequently told my readers, in the last twenty years I have taken up a vast variety of subjects for study, and I find that in taking up a new subject my mind seems, so far as the subject is concerned, to readily revert to the infant condition. At first I find facts exceedingly interesting, but by and by I begin to grasp the principles that underlie my line of study, and when such happens I find I become an adult so far as this particular study is concerned. I notice the same thing with every beginner in photography. Every raw amateur who comes to me for advice points out that in his prints there is a great wealth of detail or lack of it, as it may happen, being either very well pleased or dissatisfied with his work, as it may happen to be. I notice also that remarkably few ever get beyond the detail stage. So far as photography is

concerned, they remain children, and this applies to all sorts and conditions of men, even with those that have made reputations for themselves as having a broad comprehension of the particular subject to which their lifework is applied. A few evolve into the second stage, where principles become interesting, and from this class come the individuals who acquire reputation as picture makers. They possess or are possessed by some idea they wish to portray and the facts of nature are simply utilized as material to be used in their efforts. They have a story to tell to the eye, and facts take the place of words, arrangement that of literary style, light and shade replace choice diction.

I remember that in the books I read when a boy I cared only for the details and was indifferent to the author's literary style. Miserable paper, indifferent printing and poor binding never bothered me at all, but now my tastes demand fine, heavy paper, good letterpress, fine binding in the volume, choice language and graceful style in the reading matter, and not infrequently I read a book whose merit depends on these alone, even though the ideas expressed may be very ordinary. And so it is with pictures. As our taste develops, we care more for motive, for tone value, for decorative arrangement, than for the expressing of detail in the picture, and I have been led to write these remarks as a general answer to letters that I receive almost daily from my readers, wishing me to explain to them wherein I can see any merit in certain pictures that have been reproduced in this journal. To one and all I invariably reply that it is very largely a matter of taste and mental development, and that art is very much like religion in one respect, that each of us accepts what suits himself and rejects the rest; that at one stage of life we tenaciously hold on to certain principles or things that at a later stage we reject, and in later years we often take back what we have formerly thrown away.

F. DUNDAS TODD.

PICTORIAL COMPETITION No. 79.

The landscape competition is one of the most important of the year, and every time that it comes round I am always glad to notice the big advance in the quality of the work submitted. This one is no exception to the rule and it proves to be one of the closest I have seen. The judges spent quite a while discussing the merits of about a dozen pictures, pro and con, before they were able to make up their minds.

The following are the prize-winners:

First Prize—Louis Fleckenstein, Faribault, Minnesota.

Second Prize—W. H. Porterfield, 100 Lake View avenue, Buffalo, New York.

Third Prize—John Chislett, Indianapolis, Indiana.

SPECIAL MENTION.

George T. Power, William O. Meyer, Gust Horlin, M. E. Thomas, P. Morrison, W. G. Corthell.

PARTICULARS OF WINNING PICTURES.

First Prize—Taken in April, 6 P.M., with rear combination of Goerz lens, wide open stop. Exposure, one second on standard plate. Printed on W. & C. platinotype.

Second Prize—Made in April, on Cramer Isoplate, stop *f*-8; exposure, one second, with color screen.

Third Prize—Taken in July at 6 P.M., with stop No. 4; exposure, ten seconds on instantaneous Isoplate, printed on W. & C. sepia platinotype.

CRITICISM OF WINNING PICTURES.

"A poem," was the brief comment by one of the jurors on seeing Mr. Fleckenstein's work, and for this reason above all others it was given the leading place. In the original there is a dreaminess and mistiness about it that must be seen to be appreciated. The title is "An April Fog," and the effect is very finely rendered. The haze hangs everywhere, but is not deep enough to destroy the detail, and yet one is left with a great deal to guess about. I would draw particular attention to the softening of the trees in the background as compared with those near at hand.

Regarding this picture, Mr. Fleckenstein writes:

"I am not sorry to learn that my 'April Fog' carried off first honors in Competition 79. I am surprised, though. This picture has been a surprise to me ever since I made it. First,

much to my surprise, and that decided me to try it in your contest. Some of the critics condemn those poles, but those poles seem very necessary to me to help the composition, and I aim for



W. H. Porterfield,

Buffalo, N. Y.

SECOND PRIZE.

I laid the negative aside as a failure for four months. Then I tried a proof on some scraps of W. & C. paper, which showed some good qualities, so I enlarged negative to 8 by 10 and sent a print to the salon. It was accepted,

composition above all things in all my pictures.

"I am glad to hear you say that I have improved greatly since you knew me. I get lots of pleasure out of pictures, and particularly enjoy the con-

tests. The PHOTO-BEACON contests are the stiffest of any going, it seems to me, for I do not find it easy to win."

The second-prize picture is a very vigorous sketchy study in green carbon and is an excellent example of Mr. Porterfield's latest pictorial ideals, for he is now through with niggling detail and is all the time working for breadth with very happy results.

The third-prize picture is more in accordance with the recognized rules of composition. One sees very clearly the various masses that Mr. Chislett had in his mind's eye when he selected the point of view. There is the footpath with a mass of low foliage on each side, then the tree trunks, and last of all, in the upper part of the picture, the solidity of the leafy canopy, tying the trees to the upper margin of the print in a very suggestive way and not too obtrusive. Throughout, one must admire the fine gradation and the blending of one mass into another; altogether a capital piece of photography and a good picture.

F. DUNDAS TODD.

FUTURE COMPETITIONS.

Competition No. 82—Pictures of children under seven years of age, not necessarily portraits. Closes January 31.

Competition No. 83—Lantern slides, any subject. Closes February 28.

Competition No. 84—Snow pictures. Closes March 31.

Competition No. 85—Waterscapes. Closes April 30.

Competition No. 86—Branch of a tree without leaves, with special consideration of decorative effect. Closes May 31.

Competition No. 87—Domestic animals. Closes June 30.

Competition No. 88—Genre pictures, or pictures that tell a story. Closes July 31.

Competition No. 89—Branch of a tree with leaves, with special consideration of decorative effect. Closes August 31.

Competition No. 90—"At Home"

portraiture, that is, portraits not made in a studio. Closes September 30.

Competition No. 91—Snap-shot pictures. Closes October 31.

Competition No. 92—Landscapes. Closes November 30.

Competition No. 93—Flower pictures. Closes December 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the sender's name and address, *but nothing else*. The outside of the package in addition to our address, may bear that of sender. Accompanying a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given; also the printing process.

2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

3. Prints are not returnable.

PRIZES.

First — Books to the value of \$5.

Second — Books to the value of \$2.50.

Third — Books to the value of \$1.

Any books, on any subject, or if preferred, any article we can buy in Chicago.

HISTORICAL COMPETITIONS.

The first historical competition will close on March 31, 1905. For this will be eligible pictures of people, places, objects, buildings or animals that can in any way be considered of historical interest, whether from past associations or because of future probabilities. For instance, Indian relics of any kind, whether articles of personal wear, habitations or graves; revolutionary subjects of all kinds; places associated with early pioneers, portraits of famous men or places connected with the Rebellion, etc. All these are but suggestive, for the list could be expanded indefinitely.

The prizes will be the same as in our regular pictorial competitions.

PROFESSIONAL PORTRAIT COMPETITION NO. II.

On opening up the portraits sent in for this competition, I find a letter from one who has taken part in nearly every one of them and whose work recently

me." Recently I heard a man make an unusual statement. He remarked: "If I die to-night—and I do not want to—I would be able to say with my last breath that I did not die in debt to my stomach, because never yet has it had to go with-



John Chislett,

Indianapolis, Ind.

THIRD PRIZE.

was good enough to get inside the prize list. Among other things, he says: "I am glad to be able to tell you that I am commencing to see into things a little, things I never understood before. What I have learned from the competitions is making my work twice as interesting to

cut anything that it wanted." He is a very good fellow, but his point of view and mine are radically different, because the average animal in the wilds could make the very same statement, and those who own a horse, cat or dog generally take care that their natural appetites are

satisfied. The man who lives on this plan, from my point of view, merely exists. Living, I consider, consists largely in gratifying the desires of the mind, and I have a suspicion that the average human being dies with a vast array of ungratified mental cravings. The photographer who thinks only of his business from the dollar-and-cent standpoint is one who is merely trying to keep out of debt to his stomach. The one who aims a little higher is endeavoring to reduce his indebtedness to his mind—and this is the kind of photographer who finds his work, as my correspondent expresses it, doubly interesting, because he supplies food to both his digestive apparatus and his thinking faculties.

The first prize falls to Mr. Borry for a very fine bit of portraiture, which is just as full of delicate gradation as one could wish. In some of his best pictures, Mr. Borry has tried to run the whole gamut from white to black, but in this particular print he stops short and leaves out the very darkest, with considerable profit. The face is well modeled and the portrait is rendered just as perfectly as a fine lens can make it, yet everywhere he has held the fine gradation. It will be noticed that by means of the black mat he has keyed up the high lights considerably—almost too much, in fact—but the tone of his background is all right.

The second-prize picture is by a photographer in whom I have had considerable interest for some months. I have watched his progress very closely and am very glad to see him in the prize list with an example of very good work indeed. The pose is very simple, natural and dignified, and suggests that just before the sitter was taken he was absorbed in reading, but that, on being spoken to, he closed the book, took off his glasses and turned to listen to the speaker. I have not a single fault to find with the lighting or the gradation in the figure, because everywhere it is as good as clever technical skill can make it.

The essential feature of a good child portrait is naturalness, and it is that which decides me to place the third

prize where I did. The attitude is charming, and the nebulous suggestion on the left side of the face appeals very strongly to me. One might find fault technically with the slight lack of detail in the white drapery and on the dark side of the head, but all in all I think it quite an interesting picture.

SHORT COMMENTS.

Feldman.—A capital bit of work, but I feel that the picture should not have been cut in two.

Jukes.—The best you have yet sent in, but the rough surface paper made it unfit for reproduction.

Perkins.—You have much to learn in the matter of composition.

Runyon.—Neck of sitter too short, because of camera being too high.

Zarley.—Glad to see you again; tone quality is good, but lighting on face is too equally divided into light and dark.

Berkemaññ.—I am afraid I have pushed you into deep water. The light on the cheek suggests a bad gum-boil.

Mintz.—A capital effort, but I think you made a mistake in putting the darkest black against the highest white and the light against the darkest black.

F. DUNDAS TODD.

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Any books, on any subject, or, if preferred, any article we can buy in Chicago.

**TONING BROMID AND OTHER
DEVELOPED SILVER PRINTS.**

CHAPTER I.

THE COLOR OF THE ORIGINAL IMAGE.

Bromid and the similar papers with which this series of articles will deal

not directly visible, but can be made to give rise to a visible image by the application of certain chemicals. These chemicals are known as the developer, and these papers are often spoken of as development papers.

Longer exposure to the action of



FIRST PRIZE.

are those which are coated with an emulsion of gelatin and a silver haloid, or a mixture of silver haloids. When such an emulsion is exposed to light, a latent image is at first formed, which is

light will produce a visible image; but practical photographers are only concerned with the invisible or latent image produced by a comparatively short exposure.

This is not the place to enter into the question of the nature of the latent image; but it may be said in brief that there are three or four theories which have been advanced as to its composition. One is that it consists of a sub-haloid of silver; another that it consists of metallic silver—i. e., in both cases a chemical decomposition is assumed to occur; while another, on the other hand, is that it consists of the silver haloid, or haloids chemically undecomposed but altered molecularly—i. e., a physical and not a chemical change occurs. An extremely interesting paper by Doctor Lупpo-Cramer on this subject is contained in "The British Journal Photographic Almanac" for 1903, pages 811-835. The sub-haloid theory is fully set out and expounded in Professor Melodla's "Chemistry of Photography" (Macmillan and Co.).

A photographic developer may be described as a chemically reducing solution, so made up and controlled that it exerts an action upon those portions of the sensitive compounds which have been exposed to light, but does not appreciably affect the unexposed portions.

In order to obtain satisfactory results, the prints when completed should be of such a kind that—

(1.) The contrasts are suitably and pleasingly rendered.

(2.) The depth, or substance, of the image is regulated to a pleasing and suitable degree.

(3.) The tone, or color, of the image is good.

It is the last of these conditions which is the one particularly to be dealt with here; but since all the three are more or less bound up together, a few words must be said on the other two.

Commencing with the question of the production of black and gray tones on true bromid paper, the first point to be considered is the composition of the developer.

At one time ferrous oxalate enjoyed almost a monopoly for bromid paper development, but lately it has been very largely superseded by various other

(phenolic) developers. Ferrous oxalate gives with suitable exposure a particularly good and rich black. It is a black which, when the print is wet, has in it a slight pervading tint of blue. The comparative excellence of different tones is, of course, purely a matter of taste; but I personally very much admire the results of ferrous oxalate development, and I find it very difficult quite to equal them with any phenolic developer I have used. All the same, I think the almost complete abandonment of the iron developer shows sound judgment on the part of practical photographers. The bother and danger of using ferrous oxalate are much too great to be compensated for by a very slight gain in excellence of tone, even if this is admitted to take place.

A great number of excellent developing formulæ have been given. The following two are very good:

I.

Amidol	22	grains.
Potassium bromid.	5	"
Sodium sulphite ($\text{Na}_2\text{SO}_3 \cdot 7\text{H}_2\text{O}$)	$\frac{1}{2}$	ounce.
Water to	10	ounces.

II.

Metol	16	grains.
Hydroquinone	8	"
Potassium bromid.	6	"
Sodium sulphite ($\text{Na}_2\text{SO}_3 \cdot 7\text{H}_2\text{O}$)	$\frac{1}{2}$	ounce.
Sodium carbonate ($\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$)	$\frac{1}{4}$	"
Water to	10	ounces.

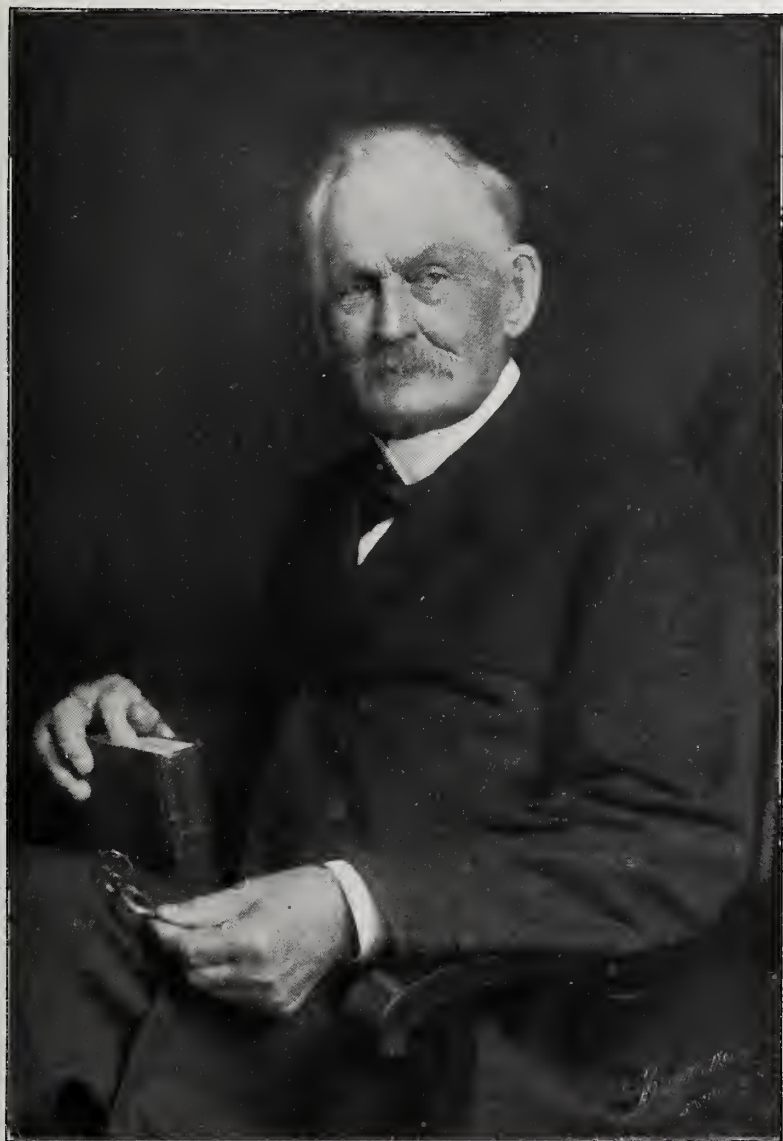
The amidol developer only keeps in good condition for about two days after mixing.

These formulæ work well with all brands and qualities of paper; but it is a good general rule in the case of any particular brand of paper to follow exactly the directions issued therewith.

Such formulæ as the above are what are generally termed normal developers—i. e., they are about the strongest developers which can with advantage be employed. The actual quantity of sodium or other soluble sulphite to be used is an important consideration. No risk of stains, caused by brown oxidation products of the phenol—i. e., amidol, metol, hydroquinone, etc.—should be run, and therefore a quantity

of sulphite sufficient to prevent resinification from taking place must always be added. With the above formulæ, about three per cent (thirteen grains to

an accelerator as well as a preservative, and if it is reduced in quantity, sodium carbonate or some other suitable substance must be added to make up the



SECOND PRIZE.

the ounce) is the minimum that can with perfect safety be used, and five per cent will be found better.

With amidol, sodium sulphite acts as

deficiency. Five per cent should not be much exceeded in any case, because sodium sulphite is a factor in the production at times of fog and certain

stains — silver stains as opposed to oxidized phenol stains.

What happens is this: The sodium sulphite dissolves out of the emulsion some silver haloid, and forms a solution of a double sulphite of silver and sodium. The silver solution is easily reduced in the absence of sufficient potassium bromid by strong developing solutions. This produces general fog.

It is, of course, not the only way general fog can be produced — the non-actinically altered silver haloid is reduced *in situ* by too strong a developer, as can be shown by eliminating the chance of sulphite action. The production of fog through the action of sodium sulphite is, however, an important phenomenon which should be borne in mind by the bromid worker. The action can be observed by varying the amount of sodium sulphite in a normal developer containing no bromid, and in another way which will be referred to later. In the case of amidol, the above observation is, of course, no test by itself.

When the developer is of a slow-acting nature, yellow silver stains are produced if a large quantity of sulphite is present.

Too much potassium bromid must not be added, or the purity of the tone will be impaired. The quantity of this substance allowable varies with the constituents of the developing solution, especially with the particular phenol used. It is not necessary with all brands of paper to add as much potassium bromid as is contained in the formulæ already given; but it must be remembered that these are general formulæ. With these particular formulæ, the quantity of potassium bromid can be even increased without harming the tone in any way.

The color of the silver image finally obtained on bromid paper depends, as every one who has used it knows, not merely on the development, but on the exposure as well. When a normal developer is applied to an exposed bromid print, and brings out ample detail and ample but not too great density, and

when also, after this has taken place, however long the print is subjected to the developer, no further silver is deposited except in the form of general fog, such a print is said to have received a "correct exposure."

It may not be strictly true to say that no further density is gained by a print which has received a definite and limited exposure after a certain definite period of development. In the case of certain emulsions developed with certain developing solutions, at all events, a kind of silver intensification is apparently set up, very likely due to some solvent action such as might be exerted by ammonia or by a soluble sulphite. The well-known experiments of Sir W. Abney and Doctor Eder must be here recalled to mind (see Meldola's "Chemistry of Photography," pages 175-176). However, for all practical purposes with all the commonly employed developers for bromid work, it is true that after a certain limited period of development, no further density is gained by the image, or what further density is gained is incommensurate with the amount of general fog produced.

A "correct" exposure may or may not give the representation and contrast required in the print. We must modify exposure and development to suit the result required. Exposure must be shortened to increase contrast, and increased to decrease it. Unless we wish to develop right out, it is necessary to dilute the normal developer in order to give sufficient control over its action to the operator. Now, with "correct" exposure and normal development, the developing formulæ already given, and others like them, give very good black tones. On dilution, they also give excellent gray tones, correct or nearly correct exposure being given.

Dilution gives gray tones, because it enables us to stop development readily at any required point before too great density has been obtained. Keeping the exposure the same, a diluted developer will develop out a print to the same extent, or practically to the same extent, as a normal one, only it will, of

course, take longer to do so. The contrasts, however, are slightly lessened, and the tone slightly altered. Probably the same amount of silver is deposited, but its state of molecular aggregation is somewhat different. The contrasts can be left unaltered by giving rather less exposure in the case of the dilute developer, but then the same amount of density can not be obtained.

When, however, the exposure has to be much increased above the normal

bromid, and this fact has to be remembered when dealing with the chlorid or chiefly chlorid papers. It has also to be remembered that the color of the silver produced by the decomposition of silver chlorid is much more readily varied than that produced by the decomposition of the other haloids.

A ferrous oxalate developer of proper strength and properly restrained is an excellent developer for gaslight papers, from a chemical point of view. The



Clarence G. Brooks.

FIRST AMERICAN SALON.

and a very dilute developer used, the final tone of the print is much altered; the pure black or gray is pervaded by shades of yellowish brown. Before discussing the question of improving such spoilt tones, the production of black images on gelatino-chlorid, or gaslight, papers may conveniently be considered. These are very similar to bromid papers, but require rather different treatment in development.

Silver chlorid is much more soluble in sodium sulphite solution than silver

use of ferrous oxalate avoids all trouble caused by silver going into solution. Still, even here, it is much more convenient to use one of the more modern developers.

The following will be found excellent:

Hydroquinone	30 grains.
Metol	8 "
Potassium bromid	1 to 2 "
Sodium sulphite ($\text{Na}_2\text{SO}_3 \cdot 7\text{H}_2\text{O}$) .....	.200 "
Sodium carbonate ($\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$) .....	.290 "
Water to	10 ounces.

Development with such a formula should be complete in about half a minute. If the potassium bromid be present in too great a quantity, the tone is rendered a greenish black, which is very unpleasant. A developer containing a larger quantity of such a rapid and powerfully acting reagent as metol would need more restrainer for the prevention of general fog.

With correct or nearly correct exposures the above developer gives exceedingly fine tones with all brands of paper. The shadows are of a very rich black tone, which, when the print is wet, has a distinct shade of blue pervading it.

Gaslight papers are sold by most manufacturers in two qualities—one for hard negatives and one for softer ones. It is certainly a good thing to avail one's self of these two qualities of paper as much as possible, but it should not be supposed from this that gaslight papers are not suitable for modified exposure and development. It is quite true that overexposure and development with a dilute developer utterly spoils the tone for the time being, but this can be remedied afterward, as will be shown in the next chapter.

Quite recently a method of obtaining pleasing contrasts in a bromid or gaslight print from a negative too "hard" to be dealt with in a normal manner was proposed by Mr. Sterry. Exposure is made so as to render suitably the detail in the high lights—i. e., the shadows of the negative. If now development with a normal developer were carried out, the shadows (of the print) would be, of course, completely fogged up. Mr. Sterry, however, has found that by immersing the print between exposure and development in certain oxidizing solutions, the contrasts of the print can be greatly lessened, and the overgrowth of the shadow density prevented. By this method, then, similar results are obtained to those given by overexposure followed by development with a dilute developer, only there is this important difference, that no alteration or at the most only a slight alteration is brought

about in the tone. Hence, none of the proceedings hereafter to be described for improving a poor tone need be gone through if Mr. Sterry's method is employed.

The practical details are few and simple. The print after exposure is thoroughly soaked in water (three minutes at least), and is then immersed in a dilute solution of potassium bichromate or chromic acid, the latter being best. The strength of the solution and the time of immersion vary with the effect that is desired.

As a preliminary trial, one can ascertain the effect of an immersion of two minutes' duration in a chromic acid solution containing two grains of pure chromic acid in every ten ounces of water. If potassium bichromate is used, a stronger solution is necessary than in the case of chromic acid, and apparently it will not work well with all brands of paper. It is best to wash the chromic acid or potassium bichromate out of the film before development, although merely rinsing in water appears to suffice. Fifteen minutes' washing in running water will be found as a rule sufficient to eliminate all the chromium. In the case of bromid paper, an ordinary normal developer works very well after the chrome bath; but in the case of gaslight paper, it will be found that a weaker one will generally have to be used.

The use of the normal gaslight developer will, at all events when the chrome treatment has been considerable, lead to fog production. It may very likely happen that a considerably weakened developer will have to be used with gaslight paper, and in this case, although a good tone is sure to be obtained, yet, in order to get the very best color, the process to be described in the next chapter must afterward be carried out.

I have noticed in experimenting with Mr. Sterry's method that the chrome bath has sometimes an uneven action. This unevenness, which I have observed occurs more frequently with bichromate than with chromic acid, is

the only objection which can be urged against the method. It is certainly one which all bromid workers should make a point of trying at the first available opportunity.—*Photography*.

SUNSHINE AS A HOBBY.

"Hooray! A wet day at last!"

This is my idea of the cry of many a pictorialist on holiday. At least, this is my idea after an inspection of I don't



THIRD PRIZE.

A HINT TO PHOTOGRAPHERS.—A German photographer, when taking a picture of a lady of doubtful age, places sheets of celluloid between the negative and the printing paper, thus producing a very softening effect which hides the discrepancies of age.—*Photographer*.

know how many hundreds or thousands of exhibition and other prints. Excellent they are, but oh! so gloomy. Don't their producers ever take their cameras into the sunshine? Don't they venture out of doors unless the weather is bad? Don't they think a landscape worthy of

their attention if not idealized by banks of mist?

I ought to be the first to admit the beauty of pictures whose *motif* is melancholy; for again and again I have defended such in the press. But, all the same, I do wish, sometimes, that the apostles of sadness would not be quite so consistent — and persistent. Emerson, in his "Essay on Art," says: "The details, the prose, of nature he (i. e., the artist) should omit, and give us only the spirit and splendor. . . he will give the gloom of gloom and the sunshine of sunshine." Mark that — *the sunshine of sunshine*. The spirit of nature is not confined to her gloom; and therefore to limit ourselves to that phase of her character alone is to interpret her incompletely. Moreover, it is doing ourselves an injustice, for it is risking grooviness — the picture maker's greatest pitfall. I would willingly allow that nature in her sad moods is most tempting to the picture maker, for it is in her sad moods that she appeals to our deepest and noblest emotions. Edgar Allan Poe wrote: "Let me remind you that (how or why we know not) this certain taint of sadness is inseparably connected with all the higher manifestations of true beauty." The very fact that this is so results in it being easier to make a pictorial rendering of a melancholy scene than of a bright one; easier, for example, to render "artistically" a given landscape on a foggy day than in sunlight. The fog provides the elimination of detail, the idealization, the poetry, which the photographer himself ought to provide, and not simply depend on the scene to give him. He has little more to do than to erect his apparatus and uncap the lens. Nature has brought him a picture ready-made. But suppose the sun is shining — his difficulties are legion. Niggling detail glitters mockingly at him from the focusing screen. There is no atmosphere to separate the planes of distance and make them mysterious and suggestive, as they would be if veiled behind mist. Tree leaves sparkle in myriads of tiny dots, and defy him to "mass" them. The fields are

a light green which, bitter experience warns him, his plates will render as black — a black which wouldn't have mattered if he was going to label his print "Misty Nightfall," or something of that sort. And he ends by welcoming joyously a shower of fine rain or a wisp of fog, whose presence does the work of pictorializing the view for him and removes its stumbling-blocks of brilliancy.

Surely the very fact that nature's jocund moods are difficult to transcribe should make us all the keener to try them. I don't say that when an exquisite opalescent cloud drifts across the countryside we ought Spartanly to refuse to seize the chance it brings; but I do say that we ought not to *wait* for that mist and depend wholly on it for our inspiration. Every sane and healthy creature feels "bucked up" on a bright sunny morning; why not endeavor to transfer that "all's-well-with-the-world" sensation to a plate and paper? That bank of flashing leaves is fair to the eye; why shouldn't it be fair when reproduced? May not our fetish of anti-spottiness and pro-masses be leading us by the nose too much? Those splashes of sheer *glare* in the glade beyond the tree trunks, and the luscious shadows in the foreground — must they of necessity turn out soot and whitewash? Are our medium's faults always to dominate and dictate our choice of subject?

I wish every pro-art-photographer in the country would swear a solemn oath to try and capture some sunshine when on his holiday and bring it home with him. Of course, in such a summer as that of last year the feat is an impossible one — but that's nature's fault, not ours!) Ride sunshine as a hobby, so to speak. It always pays to have a definite aim in one's holiday making, and especially in the photographic section of it. Doing one thing at a time, and doing it over and over again, till you've got it perfect and squeezed it dry, is a great secret of success. In this instance, I venture to prophesy that you never *will* squeeze it dry. Sunshine has a knack of looking different every time it con-

descends to appear in this grandly varying climate of ours, however monotonously it may behave in Eastern countries.

Oddly enough, I believe he who follows the advice I've ventured to give above will find himself not out of fashion this year, but most emphatically plumb in the middle of it. A little bird whispers that the pendulum has started swinging away from gloom to cheerfulness, in the photographic world—a swing which the exhibitions will reveal.

That's no argument, of course—but to the weak-kneed it may be comforting. They now needn't fear to be jeered at for jollity.—*The Amateur Photographer*.
WARD MUIR.

THE OIL PRINTING PROCESS.

Little that is new has developed regarding this new process, beyond a rather lively discussion as to whether or not it was referred to by Poitevin in his patent specifications of date 1855.

The essential point to the average reader is this: Will it work, and, if so, what are the handiest tools and accessories to be found in this country?

After making a few blunders, I have got results that lead me to believe that the process has quite a future. The necessary outfit consists of one or two squeegee rollers, such as are sold for about 25 cents each; a couple of pieces of glass—say old negatives, $6\frac{1}{2}$ by $8\frac{1}{2}$ in size—a bottle of turpentine, a palette knife, a package of Solio paper, a piece of clean fluffless linen and a little job printers' ink.

Begin by fixing the Solio in an album fixing bath, and for this I use the one recommended for Velox paper simply because it happened to be handy. Wash in about half a dozen changes of water, then sensitize in the bichromate bath. Mine is a saturated solution at about 60° , and I make no note of the time, as anything from one minute to ten seems all right. Dry in the dark, or, if that be inconvenient, then in an ordinary room at night. I have frequently dried the sheets on an old newspaper in the sitting-room, where the

artificial heat at this season will make them bone dry in less than an hour.

A brilliant negative gives the most satisfactory results, as this is a process that eliminates detail. I find a good, clear negative in dull weather at this season takes about fifteen minutes to show the necessary detail in the high lights.

Printing finished, pass the paper through a few baths at a lukewarm temperature until the water ceases to turn yellow, and it is ready for inking up. Job ink is darker than ordinary book ink and is, therefore, preferable, I think, because the finished image is much lighter than one would expect.

Dry the print and apply the ink as described in December issue. At first, you will think you have failed, as the print is a solid black, but keep on rolling and as soon as the ink becomes sticky by the evaporation of the turpentine the roller will remove the ink where the light has not acted and the image will appear. To hasten things, I use two rollers, one to apply the ink, one to remove it. I have two kinds of rollers, one the ordinary squeegee, the other composition. One is hard, the other soft, and in practice they seem to give different results.

I have also used different kinds of paper, but the little experience I have had with mat surfaces is not encouraging, though I must confess I do not care to speak definitely, as my earliest experiments were made with such. I find different degrees of glossiness among glossy papers, and, as is to be expected, certain subjects look better with one than with another.

I have also tried various colors of inks, but prefer the black so far, probably because I hit a fine sample. Some of the colored inks seemed coarser in the grain.

Since this process does not reproduce detail well, it goes without saying that it is more suited for the larger sizes of prints—those that are intended to be hung on the wall under glass.

F. DUNDAS TODD.

PROGRESS IN ENLARGING.

We may consider the lightest tone, either in a subject, a negative or a print, as the top of a slope, whose base is the darkest tone, and the positions between them the intermediate tones; further, by simply drawing a line to represent the slope, and giving actual values to the space it occupies, we can represent any series of tones whether sudden, step or delicate.

Fig. 1 represents in this manner a

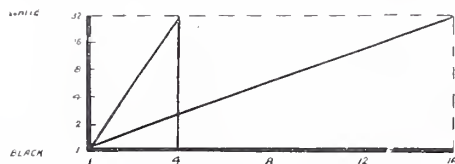


FIG. 1.

uniform gradation of tones, from black to white, across a quarter plate and a sixteen-inch print, respectively. It illustrates in a simple manner why the size of a print exerts such an important influence on its character, and why enlarging so greatly increases breadth.

Equally well, a line will directly illustrate, by its upward or downward direction and by its character of slope, curve or step, the range of tone and value of the tones in any subject, negative or print.

It is found with any particular printing paper and process that a certain fixed range of tone is required in a negative, if all its gradations are to be impressed on the paper. To illustrate clearly what is meant, I have here a sample of bromid paper which has been exposed to light, so that we get a series of tones from black to white. To darken this paper black required sixteen times the exposure necessary to tint it the lightest tone, which is only just distinguishable from white. It is evident, therefore, that any range of tone in a negative greater than this will only be partially rendered on the paper, as any longer exposure than sixteen times can not make the black paper any blacker, and any exposure less than the one does not produce any visible darkening what-

ever. In the ordinary practice of enlarging it is necessary for this reason that the range of tone in the negative must not exceed about sixteen to one, if it is required to preserve gradation in all parts. To compare with this sample of bromid paper, I have also a sample each of P. O. P. and carbon paper similarly exposed, and they illustrate that for the one we require a range of tones in the negative of one to sixty-four, and in the other (the carbon) a range of one to 256.

We require, therefore, to preserve gradation in the three processes, three different negatives, one for each.

Suppose it is required to produce an enlargement from a negative having a range of one to sixty-four.

a a a in Fig. 2 represents by means of the slope a gradation from one to sixty-four in a negative.

b b b illustrates the loss of gradation when a short exposure is given for the enlargement.

c c c represents the loss of gradation with a mean exposure.

d d d represents the loss of gradation with a full exposure.

The point to notice is that with any exposure gradation is lost, and black or white, or both, substituted, and the print if fully developed has the well-known hard or chalky appearance.

This example illustrates the position

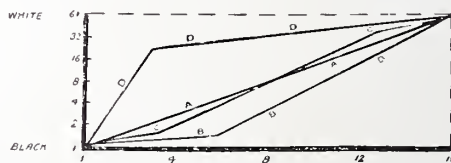


FIG. 2.

we at the present day occupy in regard to the conditions essential to successful enlarging and assuming a subject which is perfect in itself; if we require an enlargement which is also perfect, two accurate adjustments must be made:

1. The development of the negative to the proper range for enlarging.

2. The correct exposure and development of the enlargement (I have not

included the exposure of the negative, because there is fair latitude in this respect).

In the great mass of work which is daily forthcoming, errors in these adjustments produce the majority of failures or defective prints.

Suppose in a given case, having already found that a hard print lacking gradation is produced, we make a fresh enlargement and before the exposure is made place in contact with the paper a photographic positive of a process screen so that the two films are in contact. Wherever the opaque parts of the screen protect the bromid paper, it will remain more or less unaffected, and all the tones of the print will in consequence be lighter in proportion to the relative area of the opaque and transparent portions of the screen. A soft print is now obtained, which may be much more pleasing than the one without the screen; you can also vary the softness at will by placing a sheet of glass of suitable thickness between the screen next the paper and varying the aperture of the stop, the action being due to a greater or less spreading or vignetting of the light after passing through the apertures of the screen, similar to that which takes place where the screen is used for processwork. In all these cases, however (except in a particular to which I will refer presently), the range of the tones between which the gradations are reproduced will be less than when the screen is absent, in proportion to the percentage of light intercepted by the opaque portions of the screen, so that while the black-and-whiteness has been corrected, the loss of gradation remains and the result is substantially similar to that obtained when the print is softened by variations in the exposure and development; no great advantage, therefore, would appear to result from the use of the screen.

Three years ago, while testing some supposed cases of halation, I became aware that something very different from either film or reflected halation was taking place, and that that something was irradiation. The conditions

of this effect are more fully treated in the paper which follows on color photography; it will be sufficient to mention here that irradiation occurs in nearly all photographic processes, that is, the action of light in a sensitive film, when it takes the form of a line or dot, spreads laterally with a sharp outline, in a similar manner to the apparent thickening of an electric lamp filament on the retina. In the former case, the spreading increases with the exposure, in the latter with the brightness, the degree of spreading for a given increase of exposure depending upon the physical character of the film and the optical constants of reflection and absorption. Owing to this action, by simply increasing the exposure a print can be obtained with full range from black to white, although a screen is placed with its film in contact with the paper, but (*and here is the pith of the whole matter*) the range of exposures required to produce black and white is much greater than that which produces black and white in the ordinary manner when the screen is not used. Therefore, when employed in conjunction with a screen, a negative may be said to possess any working range of tone, according to whether you work on the irradiation device or on the ordinary pure tone, or partly on each.

This being so, on taking a negative with a range of one to sixty-four or one to 256, we can at once adjust our procedure to suit the negative and obtain an enlargement with perfect gradation and any degree of softness, equally as well as with a negative specially developed for the particular effect required. I have here a portrait of a girl and numerous other technical examples of enlargements produced in this way.

Let us now turn to the second adjustment, that of correct exposure and development of the bromid paper. The screen gives enlargements in which the tones are formed by minute dots differing in size, the space between the dots remaining comparatively unaffected, and we have also the effect of lateral spreading with increased exposure due to irradiation. This means, in fact, that

the conditions are similar to a multiple coated plate, with a corresponding increased latitude in the exposure. For the reason also that all the dots are equally black or nearly so, we remove the necessity for exact development; you can not make a dot blacker than black, and so minutes more or less either in exposure or development become unimportant and, even if overdone, prints

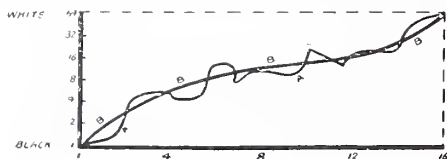


FIG. 3.

can be reduced with facility without injury to the most delicate gradations.

The screen, therefore, removes the necessity for exact adjustments in exposure and development; at the same time we have by no means exhausted the advantages which its use confers. If you take a sheet of bromid paper and expose it in the enlarging lantern without the intervention of a negative or through a flat tint developed on an exposed plate so that the paper should show a flat tint on development, it will be found that the tint is always somewhat mottled or uneven: this defect at once disappears when the screen is employed, and in addition a degree of transparency or richness is imparted due to the screen texture.

Again, when starting with the supposed negative giving a hard print, it was assumed that the gradations of the subject were perfect, and the aim was simply to reproduce it properly as an enlargement. But in how many subjects are the gradations of lighting perfect? Are they ever perfect? Take the case of a simple object such as a sphere. I have tried every possible device to illuminate this sphere and get a photograph showing perfect sphericity; daylight, arc light, incandescent light, diffusers and reflectors, with all or any of them result is defective. I have here an enlargement from such a photograph (5); alongside this defect-

ive print is one made with the assistance of the screen, a perfect sphere at once being created. What is true of this simple piece of shading is also true of complex cases.

Fig 3 illustrates a common case where difficulties arise.

a a a a case where the general character is satisfactory, but the gradations are broken up into local differences.

b b b the same, treated with a screen.

And yet again, we have been assuming that the plates used for making negatives are always perfect or nearly so, as regards their capacity for recording gradations, and that camera exposures are always accurate, but in practice we know this is not the case. Fig. 4 illustrates a subject which, through having a long range, shows underexposure in the shadows and overexposure in the high lights.

a a represents the gradations of an ordinary enlargement from such a negative.

b b the same where a screen is used.

Please do not think I am endeavoring to show that picture making is to become automatic; this will always de-

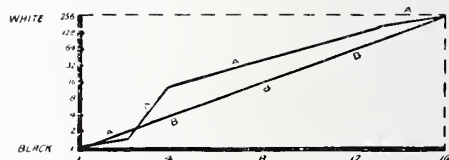


FIG. 4.

pend, as it does now, on the taste, industry and skill of the operator; what I am wishing to illustrate is that the optical conditions for success can be simplified and improved, that vexatious elements of uncertainty no longer exist, and that by taking advantage of a simple optical device you can employ it in moulding to your wishes the qualities of negatives and prints. A little practical experience with the screen on the part of individual workers will convey to them its remarkable influence and resources. It is possible some one may object to the use of the screen, on the score that, having only seen its results

when employed for processwork, they will be prejudiced against its use in pure photography; if there be any such here, I would ask them if they have any fault (due to the presence of the screen) to find with the specimens they have before them; in all these specimens a somewhat coarse screen has been employed, 133 lines to the inch. I need hardly say that any degree of fineness can be used, and any kind of grain, lace, muslin, asphaltum, etc., the only essential conditions being the breaking up of the image into lines or dots. All the desirable qualities of a print are, as a matter of fact, improved by the screen—greater delicacy of gradation, greater purity of tone and a better texture.

There is one point on which I would solicit coöperation, the word screen being so widely used to indicate its employment in process photography, we require to distinguish it when used in the manner indicated to-night. I have for this purpose taken an analogy from gardening: If a man buys a piece of land to make into a garden (a large garden), the first thing he does is to grade the land, which means that he removes all the little irregularities and connects the different levels by graceful slopes; this is exactly what the screen does in enlarging. I call it, therefore, in this connection, a "grader," and its employment the operation of "grading."

I have referred solely to the application of the grader to enlarging, because it has already proved its practical utility for such work by tests extending over the past two years.

HOWARD FARMER,
*Instructor in Photography at the Poly-
technic Institution.*

WOODEN trays may be made perfectly water-tight by applying three coats of the following:

Asphalt	3 ounces.
Pure india-rubber	30 grains.
Mineral naphtha	5 ounces.

Allow the trays to dry thoroughly between the application of the second and third coats. Care should be taken to keep this solution away from a flame; the safest way is to use it out of doors.

ANGLE OF VIEW.

"How wide an angle is it generally advisable to include when taking a photograph?" is a question well worth considering by any one who wishes to obtain the best results.

There is little doubt that photographers, as a rule, embrace a wider angle than painters. This is partly due to the conditions under which photographers are compelled to work, but is also partly due to the fact that the majority of amateurs buy a quarter-plate or half-plate "set," and the dealers, in order to be able to keep down the price, supply a lens of too short a focus. I have been recently discussing the question with a brother photographer, and have also made inquiries of a landscape painter, whose pictures are frequently to be seen on the walls of Burlington House, as to his own practice and that of other artists.

Long ago, when I first began sketching from nature, the following rule was given me: "Measure a distance of ten yards from the spot selected as point of station, and mark this distance by a stick stuck in the ground; then measure distances of five yards each way at right angles to the line already measured, and mark the ends of these lines by rods stuck vertically in the ground; then such part of the landscape as can be seen between these two rods is the utmost that may be included in the picture." Translated into photographic language, the rule may be stated thus: "Never use a lens whose focal length is less than the clear length of the plate used." It will be found that the angle thus included is about fifty-three degrees. My painter friend, however, agrees with me in thinking that landscape painters, including Turner, frequently exceed these limits. He says that he often himself does not include more than twenty-five to thirty degrees. On measuring the angle of view of a landscape on which he was engaged when my letter reached him, he found that he had included about thirty-seven degrees; but he adds that no definite rule can be laid down, as so much depends on the subject. A thirty-inch lens used on a quar-

ter-plate, which has been suggested by some photographers as an ideal arrangement, he considers would scarcely ever embrace enough subject, except when photographing a figure or group of cattle. The angle in this case would be about $7\frac{1}{2}$ degrees. He thinks it well, as a rule, not to include in the picture any foreground nearer than ten yards; the further off, within moderate limits, the painter or camera is, the more pleasing the result, but there is no need to carry this principle too far. If a standing figure five feet six inches high is placed at a distance of ten yards from the camera, then, to represent it $4\frac{1}{2}$ inches in height, a lens of about twenty-four inches would be needed. Few photographers would, however, think of using a lens of so long a focus for a standing figure when taking a cabinet picture—few studios would admit of the figure being placed at this distance; but there can be no doubt that the nearer the distance approaches to ten yards the more pleasing the result will be. Hence the advantage of using a telephoto lens of moderate power for portraiture.

Using a table of logarithms, I have made some calculations, which are approximately as follows:

I assume that the camera is placed on level ground, that the lens, with its axis horizontal, is five feet from the ground, and that the axis intersects the plate (6 by $4\frac{1}{4}$) in its center.

A.	B.	C.	D.	E.
5	62°	46°	8½	12
10	33°	24°	17	23½
20	17°	12°	33½	47
30	11°	8°	52	7

Column A gives the focal length of the lens.

Column B gives the angle along the horizon when the plate is placed horizontally.

Column C, ditto, plate placed vertically.

Column D gives the distance in feet from the camera of the nearest point of foreground included, plate horizontal.

Column E, ditto, plate vertical.

If the front board is raised so that the horizon cuts the plate into two parts, of which the lower or landscape part is one-half the upper or sky part, then the distances given in column D become approximately 13, 25, 47, 71, respectively.

If the camera is brought nearer to the ground, the distances given in columns D and E are decreased.

As the horizon crosses the plate at the same height as before, it is manifest that the landscape portion of the picture is reduced vertically, while its horizontal dimensions are not changed. Bringing the camera lower is often of advantage when photographing interiors.

The painter is able to alter the proportions of his subject—a thing the photographer can not do; thus, he often exaggerates the height of mountains so as to render them more impressive. The inability of the photographer to do this is the reason that photographs of mountain scenery are often disappointing when compared with paintings of the same views.

In architectural work, especially in interiors, the painter modifies the perspective, representing the objects before him not as they appear to his eye from the actual place where he is painting, but as they would appear if he could remove the wall behind him and get further off. All the photographer, taking an interior view of a building, can do is to get as far back as he can, and use as long a focused lens as he can, to take in what he wants to include on his plate.

The general conclusion I arrive at is that for exterior architectural subjects a lens whose focal length is about twice the length of the plate is generally quite sufficient; for pure landscape a rather shorter focused lens may often be employed; for figure subjects, a longer focused lens is desirable when it can be used. In any case, the lens should give an illuminated circle whose diameter is somewhat greater than the diagonal of the plate, so as to fully cover the plate when the rising front is used to the full extent.

N. B.—Since writing the above, I

have come across the report of a lecture by Mr. Storey, A. R. A., delivered seven years ago at the Camera Club, in which he gives an angle of twenty-eight degrees as a safe outside limit.—*Photographic News*. REV. T. PERKINS.

A NOTE FOR SLIDE-MAKERS.

In making lantern slides, it sometimes happens with certain developers that there is a yellow stain in the gelatin.

FIXING AND FIXING BATHS.

After the development of an exposed plate or film is completed, the emulsion consists partly of metallic silver, which has been reduced in proportion to the amount of light action on every part of the sensitive surface, and partly of unreduced silver bromid, which is nearly as sensitive as it was before the application of the developer. Moreover, the emulsion has become opaque, so that it would be impossible to print from the negative



Geo. T. Power,

Chicago.

This is particularly strong if actinic light falls on the plate before fixation is complete. Any attempt to remove this stain will probably be detrimental to the slide, and, as in any case prevention is better than cure, it is well to adopt a simple precaution. Add a small quantity of potassium metabisulphite to the ordinary fixing bath and the slides will be perceptibly cleaner and brighter, and even if examined by white light during fixation will not develop stain.—*Barnet Record*.

The Photo-Beacon Exposure Tables are guaranteed correct. Price 25 cents.

even if it could be safely exposed to white light long enough to do so. In order to render the negative permanent, so that it may be exposed to white light, and to make it more nearly transparent so that it may be used for printing purposes, the unchanged silver bromid must be dissolved and removed from the gelatin. Silver bromid can not be dissolved in water, and so this is accomplished by placing the plate in a chemical solution, called a fixing bath, which clears or fixes it, leaving a reversed image or negative of black metallic silver imbedded in gelatin, representing by proportionate degrees of density or opacity the different

degrees of light and shade in the view photographed.

There are several solvents of silver bromid, but because of the expense and the poisonous nature of some, and the impracticability of others in connection with a gelatin film, sodium hyposulphite or, more correctly, sodium thiosulphate, is the one salt commonly used for fixing. The name sodium hyposulphite originated from the relationship it bears to sodium sulphite. A comparison of the chemical symbols shows this. It will be seen that the hyposulphite contains one more atom of sulphur than the sulphite.



Sodium Sulphite. Sodium Hypsulphite.

On the other hand, the name sodium thiosulphate comes from the relationship it bears to sodium sulphate, the prefix thio referring to the sulphur. It will be seen that an atom of oxygen in the sulphate is replaced by an atom of sulphur in the thiosulphate.



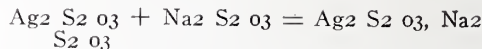
Sodium Sulphate. Sodium Thiosulphate.

It may be interesting to note that John Herschel suggested sodium hyposulphite, or hypo as it is generally called, for a solvent of the silver haloids, as early as 1819. Although it was only a chemical curiosity at that time and cost nearly \$40 per ounce, improved methods of manufacture have so reduced the price that it can be bought everywhere for from eight to ten cents per pound at retail.

The action of hypo on the unaltered silver bromid is peculiar as well as complex. When any silver haloid salt, either silver bromid, chlorid or iodid, dissolves in a solution of hypo, the color of the silver salt is destroyed and an insoluble silver thiosulphate is formed by double decomposition. Assuming the haloid salt to be silver bromid, the reaction is as follows:

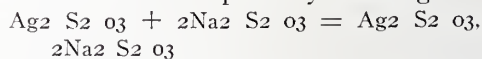


Silver thiosulphate, although insoluble in water, at once dissolves in the hypo solution, forming a transparent double salt:



This silver and sodium thiosulphate is also insoluble in water, and if the plate is taken from the bath as soon as the creamy color disappears from the film, or if the bath is too weak, the salt can not be removed from the film by the most prolonged washing. Many beginners make a mistake at this point, for negatives will clear in about ten minutes, having lost all trace of their former creamy whiteness, and appear thoroughly fixed. But if fixation is stopped as soon as the plate is cleared, the insoluble salt remains in the film after the most thorough washing and, like all silver salts, is sensitive to the light. In time it will discolor and set free sulphur and unstable sulphur compounds which finally destroy the image, turning it yellow and finally very dark brown in spots as a result of the decomposition into silver sulphid. Many an amateur has looked over his old negatives and found them discolored, covered with a powdery deposit and unfit for printing. He generally thinks they were not properly washed, but in nearly every instance the trouble was in the fixing rather than in the washing.

If, instead of removing the plate from the hypo solution as soon as every trace of silver bromid has disappeared, it is allowed to remain as long again as was required to wholly remove the milky appearance from the back, the double silver and sodium salt, although insoluble in water, is readily so in an excess of hypo solution, and when so dissolved is converted into a compound which is soluble in water and easily removed from the plate by washing.



From these statements it is evident that the whole problem of easy and thorough washing is simply the problem of complete fixing, and this can only be secured by a somewhat long immersion in a strong hypo solution. Plates of medium density may be left over night in a fresh, cool hypo bath without the slightest injury. It may be well to mention here that the hypo bath should

always be freshly made, never in advance, nor should it ever be kept for use a second time. The salt is cheap, and a fresh solution will insure immunity from many troubles.

Very prolonged action of the hypo solution has a slightly reducing effect and very thin negatives should not remain in the bath for longer than an hour or two. These statements are not made because an all-night immersion is necessary, but to show that in case of emer-

longer time, as they clear much more slowly.

The plain hypo bath is usually compounded with one part hypo to four parts water. This is cheap and, if freshly made each time, will insure perfect fixation and sufficient hardening, except in very hot weather, tropical climates, or with cheap plates coated with inferior gelatin. Under such circumstances, a different bath must be used. Plates should fix in a vertical position



Gust Horlin,

Chicago.

AUTUMN.

gency it will do no harm. If a plate remains in the fixing bath for as long again as is required to clear it from all traces of milky whiteness, it may be regarded as completely fixed, although the negative will without doubt be clearer and more snappy if allowed to remain for a few moments longer. This is due to the reducing action of the bath on the slight surface fog which is generally slightly noticeable on plates that have been loaded and developed in red light. The minimum average time for complete fixation with most of the well-known plates is twenty minutes, but double-coated plates require a much

if possible so that the heavily saturated particles of the solution issuing from the film may at once sink to the bottom and not impede the further action of the bath, as would result in the horizontal position where the heavily saturated solution lies on the film and almost prevents the access of fresh particles.

If a solution is desired for use in hot weather, with cheap plates, or if the worker desires a solution which may be made in advance in large quantities, an acid bath is desirable. Such baths are made by the addition of one or more substances to the hypo solution, such as

acetic, sulphuric, citric or tartaric acid, common alum or chrome alum and sodium sulphite. The chemical action of these baths is somewhat different from the plain hypo; each bath, in fact, has its little difference, but the final result is practically the same.

If any acid substance is added to the hypo solution, a more or less rapid decomposition of the solution results, accompanied by the formation of unstable compounds of sulphur, or the separation of free sulphur, and frequently both occur. Sulphuric or any strong acid causes an immediate decomposition of the hypo solution, liberating hyposulphurous acid which breaks up into sulphurous acid and free sulphur. Hyposulphurous acid has a tendency to sulphurize a negative and, combined with free sulphur, the seeds of ruin are generally sown. They both attack the finely divided silver in the image, and the destruction of the negative is the eventual result. It is, however, an established fact that a fixing bath containing a weak acid, such as sulphurous or acetic, will often clear away brown stains and give a brighter negative than can be obtained with plain hypo. This is especially true in the use of orthochromatic plates which are so very sensitive that a light surface fog is almost inevitable, but which is almost wholly removed by an acid bath.

Sulphurous acid can be readily added to the hypo solution in the form of sodium bisulphite, and with this there is little fear of sulphurizing the negative. The following formula is quite satisfactory, as the decomposing action is very slow, although it does take place finally:

Hypo	4 ounces
Sodium bisulphite	1 ounce
Water	20 ounces

Although chrome and ordinary alum are not usually considered acid salts, they have a great tendency to form basic salts and evolve free acid, which decomposes the hypo. Fixing baths compounded by the addition of either of these salts alone to the hypo solution should be avoided.

I do not intend to enter into a lengthy

discussion of the merits and demerits of the various fixing baths, but shall content myself with saying that in my experience an acid bath compounded with hypo, sodium sulphite, common alum and acetic acid is the best all-around bath for every kind of work in the hottest weather in summer as well as on the coldest days in winter. The alum is used for its hardening properties; the acid is a preservative and aids in clearing away the surface fog; and sodium sulphite is added to prevent the acid and alum from acting on the hypo and precipitating sulphur. As acetic acid is a very weak acid, decomposition of the solution is practically eliminated. Such a bath lasts longer, hardens the film and clears the plate better. The formula which I have found most satisfactory is that recommended by the manufacturers for Velox paper. It is as follows:

ACID FIXING BATH.

Hypo	16 ounces
Water	64 ounces

Dissolve, and then add the following hardening solution:

Water	5 ounces
Sodium sulphite (crystals) ½ ounce	
Acetic acid No. 8.....	3 ounces
Powdered alum	½ ounce

This bath is equally good for Velox papers, dry plates and films, and, as it will keep perfectly clear for an indefinite period, may be made up any time in advance. It may be used repeatedly as long as it is strong enough, and requires but little attention. If the plates are not rinsed in water sufficiently after they are taken from the developing solution, the developer is carried into the fixing bath, more or less and the bath becomes slightly alkaline as a result. Such a condition will be indicated by soft, slimy films and peeling at the edges. Test the bath occasionally with blue litmus paper. If it fails to turn red, it has lost its requisite acidity, and one-half ounce of acetic acid should be added to each fifty ounces of solution.

PHIL. M. RILEY.

KALLITYPE.

Mr. F. Dundas Todd:

DEAR SIR,— Since the publication of my articles on kallitype, I have had letters from more or less perplexed workers who found themselves in need of further enlightenment. In this connection I would say that I am always willing, when possible, to reply to such requests in direct manner, by personal letter, when such is made possible by the enclosure of the necessary postage,

too much of a stranger. To write the full particulars about the camera took about a thousand words, and a magazine gladly gave me for this a check for five dollars. Why, then, should I waste it on a person who did not think it worth the price of a two-cent stamp? Later, this lady did write me, enclosing the postage, and I gave her such information as was possible within the limits of a letter.

In September (1903) *Photo-Beacon*,



Morris E. Thomas,

Cadillac, Mich.

which Uncle Sam invariably exacts of me in forwarding my mail.

Some people are so absorbed in the prospect of getting the desired information, they forget to take note of this contingency, and I look in vain in the envelope for the necessary postage, and, sometimes, rather than disappoint, I myself supply the deficiency. One lady, who had seen some reference in an article I wrote, to a certain invaluable home-made camera that gives me the greatest pleasure, wrote me a letter of request for full particulars, but forgot to enclose the stamp for reply. This was one of the cases where I failed to respond, for the primary reason that she expected

I gave a formula for modified kallitype, which I found produced excellent prints at times, but which, for some reason quite beyond my ken, would not work at other times. Lately, I have had a letter from a man who used the formula with fine success. He sent some prints as fine as I ever could expect from any process. He says he filters his solution, using only the clear portion of the liquid, there being then only about $3\frac{1}{2}$ drams remaining of each ounce. This seems wasteful, but if the prints he submitted are a sample of the possibilities, the waste is justified.

One correspondent of late wrote: "I am working the kallitype process, as

given by you in the August number of the magazine. In making up the developer as given, when the oxalic acid was added there was thrown down a white precipitate, evidently silver oxalate."

In reply, I wrote him to this effect: Never mind the white precipitate. I see no objection to this, providing we get the results we seek. The best plan, it seems to me, is to add the oxalic acid just before we begin to develop. This will insure no deterioration in solution, as might follow the keeping solutions already mixed in their entirety.

To-day he replies to this, from which I take the liberty of quoting: "I tried the formula you sent me, shortly after receipt of your letter. With a thin negative, it gave as good a print as I could wish for, but most of mine were too contrasty to give good results. I tried the weaker solutions, and then I failed to get the black that I wanted. I did not try a very strong developer. Since then I have been crowded with work, and have not found time to continue my trials. The sample you sent me was all that any one could desire, for color and gradation. When I get that combination in my negatives, I shall be mightily pleased. I feel photographers owe you a debt of thanks for publishing a formula that gives such results, and I for one am much obliged to you, both for that and the kind advice you sent me as to the working of the process."

Doubtless there are those who have tried the process and failed. To such, I would say, do not hasten to condemn the formula. Some slight variation of mixing solutions may occasion the want of success. Sometimes, when mixing the various ingredients, shaking the bottle between each of the additions will produce such variation. My advice would be, mix in the order given, and without much agitation of the contents; put the bottle aside for ten hours. By that time the chemicals will be dissolved; then the bottle may be shaken, so as to thoroughly mix the ingredients. As to the silver nitrate solution — the developer — to make certain of success and insure good black tones, just before using add

to each ounce of diluted developer a grain (a piece about an eighth of an inch) of oxalic acid.

Fine prints have been made by this process, and are possible in the hands of most any one possessing the necessary patience to follow the thing up when some slight difficulty looms in character approaching a veritable mountain.

JAMES THOMSON.

CRITICS AND CRITICISM.

ROXBURY, November 9, 1904.

Mr. F. Dundas Todd:

DEAR SIR,—Mr. J. Clyde Wilson takes exception to the views as expressed in my article entitled, "Critics and Criticism." I might as well confess here that controversy can prove nothing on such a question, as there is bound to be honest difference of opinion. Still I feel that some sort of an answer is in order.

The art workers only claim the right to be judged by a jury of their peers, in so far as their product is concerned, and I think any court of justice would recognize that desire as a not unreasonable one. Esthetics may be called a science, but it does not seem to be one that is very exact. The idea of beauty in the East, for example, does not seem to conform with the conception held among so-called Christian peoples. And even in the beauties of Grecian art there is nothing that will square with that of the Louis XIV. or Louis XV. in France. By what rule can we claim beauty in both? Artists are, I think, rightly restive under criticism of people who have nothing but book learning in forming their judgment. The esteemed head of the New York Metropolitan Museum of Art only lately, referring to this class, said, "The critic is usually some college-bred man with considerable book knowledge but very little real feeling for art." Such people may have good taste, but it requires something more in my humble opinion in estimating the qualities in work of an artistic character. To quote from a standard author, "He who derives a particular pleasure from music

(or art) may be said to have a taste for it. He who makes very great proficiency in the theory and practice thereof may be said to have a genius for it. It is obvious, therefore, that we may have a taste for a thing without having genius, but we can not have genius without having a taste therefor. For nothing can so effectually give a taste for any accomplishment like the capacity to learn it, and the susceptibility of all its beauties, which circumstances are inseparable from genius."

would never have survived if contemporaneous art criticism could have killed them."

The capacity of the judge means much to the judged. Unjust comment has sometimes led to untimely graves. The student of art, I have found, pins his faith on the critic who, when needs be, can take the pencil or brush out of his hand and give him an object lesson of "how to do it." Nor do we find our art schools hiring as critics and instructors any other kind.



W. G. Corthell,

Wollaston, Mass.

LAKE KILLARNEY.

Technical excellence can only be justly appreciated by those who have tried to acquire it. The artist that has run the gamut of technic is obviously the person to judge of that quality in the work of others. If criticism is the simple matter of analysis it is claimed to be, how comes it these theoretical wise men are so often wrong in their deductions? They ought to be able to pick the winner with certainty. But they fail to do this, and the past is full of examples of such failures. Indeed, it will be found that few of the masters, old or new, but what have suffered thereby. Hunt, referring to Daubigny, Diaz, Cowt and Millet, says, "They are names that

Private opinion in art matters is the prerogative of all, but authoritative criticism that may make or break, exalt or depress, mark the difference between an empty stomach and a full one, is quite another thing. When the aspiring artist's bread and butter depend on the qualifications of the professional critic, it is obviously no joking matter.

Sincerely yours,

JAMES THOMSON.

HISTORICAL COMPETITION.

Don't forget the first historical competition closes on March 31, 1905. For fuller particulars read December issue.

WHY I LIKE KODOID PLATES.

In the practice of home portraiture, making from one to five dozen negatives during a day, I have found Kodoid plates such a time and labor saver, besides giving such beautiful soft effects in the finished print, that I have written the following as the result of my experience, for the benefit of others who may not have tried them.

In the first place, five or six dozen Kodoid plates can be carried about all day, with my other apparatus, with perfect ease, while the same number of glass plates would be quite a burden.

In developing, I slip one plate into the developer, rock the tray a little until exposure is found to be about normal, turn the negative over and let it develop face down, while another is slipped in to develop face up. Covering that tray with a board, I place another tray on top and slip in two more negatives, finishing the whole four in fifteen to twenty minutes.

In fixing and washing, I treat them the same as prints, putting as many as wished in a large tray of hypo and washing in ten or twelve changes of water, making wash boxes and fixing boxes unnecessary.

I find the surface of Kodoid plates much easier to retouch than the hard surface of glass plates, the texture being more like drawing paper.

Printing may be done from either side, making a reversed image if desired or obtaining the correct picture in carbon with the single transfer.

Best of all, the non-halation and orthochromatic properties of Kodoid plates give the finished print a delicacy and softness beyond comparison with prints made from negatives on glass; especially is this so in subjects of much contrast.

Last, but not least, is the keeping and filing of negatives. How often have I hunted for a certain glass plate, looking through the whole batch to find it at the end. Perhaps others may keep their negatives filed and in order, but I never felt like spending my time that way. With Kodoid plates, I can put all of

one subject in an envelope together and, while using for printing, etc., can lay them around anywhere without danger of scratching or breaking. After work is finished on them, the envelopes can easily be put away, arranged alphabetically, as there are very few of them, compared to glass plates, where each plate must be put in a separate cover.

On the whole, the non-halation and orthochromatic qualities of Kodoid plates make them all that a plate should be, while the ease of keeping and filing the finished negative has saved me no end of trouble, to say nothing of the other advantages of light weight, fixing, washing and retouching. I have never yet scratched a Kodoid plate.

WM. S. RITCH.

RICHMOND HILL, New York.

BROOKLYN CAMERA CLUB EXHIBITION.

The Brooklyn Camera Club announces the following rules to govern the affairs of its coming exhibition and competition, to be held at its rooms on February 16, 17 and 18, 1905.

The competition is open to amateur and professional photographers.

Pictures must be framed or *passepapertout*, and forwarded, express charges prepaid, to the club rooms, 776 Manhattan avenue, Brooklyn, New York, not later than February 11, 1905.

The name of the exhibitor and address, also title of picture, must be written on back of each frame, and a list of same sent to the chairman of the print committee.

Judges will be selected and announced later.

The following are the awards:

President's award for the best picture in the exhibition, a silver medal; a bronze medal and honorable mention in the following classes: Genre, portrait, landscape, marine and miscellaneous.

The jury has full power to withhold any awards in the different classes where there is not sufficient merit in its judgment to warrant same. Also is privileged in discriminating on the

pictures sent in, on any such pictures that do not meet its approval for hanging in this exhibition, as the jury is requested to select up to two hundred pictures.

Further information will be gladly furnished by addressing

MR. C. M. SHIPMAN,
Chairman of the Print Committee.

PHOTOGRAPHIC PROVERBIAL PHILOSOPHY.

Of the making of developers there is no end, but the price of pyro does not alter.

It is a wise amateur who knows what *not* to take.

Automatic hand cameras enable plate



Wm. O. Meyer.

THE Illinois College of Photoengraving, Effingham, Illinois, after considerable wrestling with the lighting problem, has solved it by installing a plant of its own, so that the students are no longer dependent upon fitful daylight. This engraving department of the College of Photography is already a very popular one.

A DIFFICULT TASK.

"Jack, dear, I do wish you would get another photo taken."

"How often have I told you I will not?"

"But why not?" (Then, thoughtfully, after a pause.) "Are you afraid of being asked to look pleasant?"—*Punch.*

manufacturers to go to business in motor cars.

One touch of hypo makes a whole batch spoil.

A foreground shutter, an orthochromatic plate and a dusting brush open the workhouse door to the retoucher.

A virgin plate is more esteemed than one that bears two pictures.

All is not gold that glitters on a camera — much is often lacquer.

Do not spoil the picture for a ha'porth of fresh hypo.

Negative beauty is only film deep.

He who exposes quickly often exposes twice.

A wise amateur photographer is merciful to his victims, and employs a professional retoucher before he sends them their portraits.

To be out of focus is to be in the fashion.

In photographic composition, art and artfulness are often confounded.

Retouching covereth a multitude of sins.

It is always the best negative which is spoilt.

A cat may look at a king, but a kodaker is not allowed to gaze at the Kaiser.

There's a good deal of faking between taking and making.

One man can invent a shutter, but a hundred can not make it work properly.

Expose in haste, repent in the dark-room.

It's best to sell the old camera before you buy the new.

A fellow feeling makes us wondrous kind to the failures of our competitors.

Artistic photography oft changes its fashion, but the cult of the pictorial postcard waxes continually.

Troubles never come singly, especially when spring cleaning invades the darkroom.

Distilled waters leave no sediment.

Honesty is the best policy, but professional photographers always prefer a deposit.

Too many cooks spoil the broth, and a wise man develops his plates in solitude.

Prizes are not always given by philanthropists.

Photographic imitations of nature are not always regarded as the sincerest form of flattery.

Loyalty ranks high among the virtues, but it is best to change the plates before making a fresh exposure.

If the eye of the ruby lamp could weep, its light would often be dimmed by tears.

DR. T. F. GRENFELL-BAKER.

A LARGE LENS.

One of the largest photographic lenses in existence is that purchased recently for the Cape Astronomical Observatory in South Africa. The smaller "Cooke" lenses are of course well known in America for ordinary

photographic purposes, but this giant has an aperture of about ten inches in diameter. The total weight of the lens with its mounting and cameras is over six thousand pounds, one hundred pounds being the weight of the glasses. This large "Cooke" lens forms microscopically sharp images of the stars throughout a negative fifteen inches square, the exposure being about two hours for each plate.

A MAN who takes the worst view of everything is not necessarily a pessimist. He may be an amateur photographer.

EDITORIAL TABLE.

HAMMER's little book, "A Short Talk on Negative Making," has been thoroughly revised and brought up to date in a new—the seventh—edition. This booklet is very practical, gives a great deal of useful information in very plain English and should be in the hands of every one. It will be sent on receipt of a postal by the Hammer Dry Plate Company, St. Louis, Missouri.

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COMPETITION.

For years the photographic world has been keenly interested in the artistic ideals of the wonderful little people of the Orient, the Japanese. At first we of the Occident smiled indulgently at their pictorial efforts, but after a while it dawned upon us that they had a lesson to teach and we had one to learn, so now it is difficult to find a painting or photograph made in recent years that does not show Japanese influence on the mind of the artist. All this is but the repetition of a fact as old as history, which is that when a supposedly advanced people starts out to impress its ideas on an inferior one, the actual result is an exchange of ideas. The most recent and notable illustration of this is found in the efforts of the people of Great Britain to convert the Hindoos of India to Christianity. The missionaries have undoubtedly got results to show for their century of efforts in that immense country, but the Western world has in return received from the same land the principles of theosophy with its subordinate religion — Spiritualism — and I suspect there are more actual converts to these doctrines among Europeans and Americans than to Christianity among the Hindoos.

Recently I have been much interested to note how the Western world is again absorbing an idea from the Eastern — this time an ethical one. Broadly speaking, our conceptions of morality came to us from Asia, and as far as I can gener-

alize them, the underlying principle is this, that morality is an effort by psychological means to restrain the strong man in his might so that he may give his weaker brethren a chance. But alongside of this has run its very antithesis, namely, the conception that competition was a great benefaction to the human race. Until recently our whole business structure was based on this idea of rivalry, and so the man of moral instinct was terribly handicapped in the struggle with those differently constituted. All of us have had the blood of our fellow man spattered in our faces as a result of the competitive system, but even our ethical teachers, while they preached the gospel of love, felt that competition was a law of the creator, though I fancy they must have often wondered how two such opposite principles could exist in the same world at the same time.

About fifty years ago Karl Marx, the exponent of scientific socialism, pointed out the absurdity of the competitive system, and set forth explicitly this principle: that competition was, first, the death of the trader; secondly, in time competition would kill competition. His law appears to be proved true, for the whole industrial world is at the present moment striving with might and main to attain that one end. Our capitalists have formed huge corporations so that individual owners of capital will not compete, and our labor unions are organized for exactly this same end on be-

half of the worker. Competition is killing competition.

And now we learn that centuries ago the Japanese arrived at exactly the same conclusion, for one of their strongest ethical doctrines is that competition is immoral. What is more, they have a moral principle they can live up to while it is utterly impossible for any man of the Occident to follow to the limit or any where near it his golden rule of doing unto others as he would others should do unto him. The young, active Japanese jinricksha man can not be tempted to pass another of his kind who is proceeding in the same direction as himself, no matter how feeble or old he may be, because that would be competition, but the Christian will not hesitate to display his love for his fellow man by capturing his business and ruining his home as a consequence. Competition may be the life of trade, but it certainly does not assist the development of the Christian virtues.

At the present day in this country I know of no business where competition is so evident as among professional photographers. The net result to the average man is an income that is not a fair return for his skill, capital and labor. The question I want to ask each photographer is this: Since he has gained so much by accepting the Japanese conception of artistic composition, would he not gain still more by adopting that great underlying ethical principle from the same source that competition is immoral? F. DUNDAS TODD.

HISTORICAL COMPETITIONS.

Are you getting in line for the historical competitions, the first of which will close on March 31? Remember the important feature of these competitions is the human interest of the subject, which interest may be of very recent date or may go back for a thousand years. In the life history of the human race the cliff dwellers are just as important as the Anglo-Saxon, the red Indian as the Roman, each being but a link in a long chain that reaches back into the mists of antiquity.

PROFESSIONAL PORTRAIT COMPETITION No. 12.

The Christmas rush doubtless prevented a number of professional photographers from sending in their monthly contribution to this competition and it is therefore more limited in its field than formerly, but most of those who submitted assure me that it is the event of the month to them, and that in striving to secure pictures to submit the result is that their ordinary run of work is rapidly rising in quality.

The first prize this month, in my opinion, falls to a professional in Pennsylvania who has been a prize-winner before. Now, as then, what impresses me is his keen appreciation of tone, which is evidenced not only in the lighting of his figure but in his choice of background, the result being that along with the soft blending that is everywhere he has secured an almost stereoscopic roundness that is very effective. I would draw particular attention to the fact that he has worked with a short scale of lighting, because in the print there is not a pure white nor any approach to it, and in this respect he has, I think, shown great wisdom. Coming now to the composition, all in all I consider the lines to be very good. If I were to find fault, it would be with the one on the right side of the neck, which, I think, runs rather abruptly into the cheek. A very slight turn of the body would have been, I think, an improvement.

The winner of the second-prize picture is a young man I have grown to have quite an interest in. He is located in a little town in the Rockies and has faithfully followed these competitions almost from the start. Little by little he has climbed up from being a tailender into second place, and I have not the least bit of doubt that in a few months he will be on top with the first prize. One thing I like about his work is his freedom from the conventional. That is to say, he does not have a few poses that everybody must conform to and so he never hesitates to break away from the beaten path. It will be noticed

that he has tried to portray a live man in a very natural attitude with, I think, a very happy result. I would draw attention to the fact that he has emphasized the brain of his sitter by concentrating his highest light on the temple and

third prize in that competition. It is rather unusual for a town of less than three thousand people to produce a couple of prize-winners the same month in our competitions and so I feel that I ought to mention the fact.



SECOND PRIZE.

running the lower part of the face into shadow. The highest light of all is the collar, which is very narrow and seems to me to be just strong enough to separate the head from the body and to concentrate the eye upon the former. Those interested in Competition No. 81 may be pleased to know that the portrait is that of the gentleman who wins the

Speaking of that locality reminds me that about one hundred and fifty miles east of these gentlemen there lives a reader of this magazine who, off and on for thirty years, has been drawing mental pabulum from me. As a boy I taught him ordinary school subjects, as a young man in a different city I taught him shorthand, and now in a different

country, although thousands of miles apart, for a number of years I have been guiding his footsteps in photography. I sometimes wonder if it is possible that some day I may be fated to teach him the principles of some other subject.

Some months ago I hinted to one of our prize-winners that I would like to see him make a little departure from his usual style, and in the next competition he proved that he could make a change, but the result was not at all satisfactory. However, he comes out smiling in this competition and secures the third prize, working along a new scheme of lighting. It gives me a vast amount of pleasure to learn that by a word in season I have opened up a wider field to this photographer's mind and now I intend to sit back and watch him run into the first place with a portrait that will be a surprise both to himself and to me.

So many hundreds of photographers tell me verbally and by letter that some day when they make a good thing they are going to send it to me. As a matter of fact, I never hear from them. The results achieved by such men as our second and third prize-winners are got by entering into these competitions with the best that one has, and actively engaging in the struggle for supremacy. I have no hesitation in saying that if the poorest professional in America will steadfastly enter into these competitions every month for a year, he will at the end of the time be at least a good average workman and in all likelihood above it.

BRIEF MENTION.

M. L. Greene.—A charming picture of a child, fine gradation on figure, background far too dark, too many spots in flowers and carpet or tablecloth.

Hindermann.—You are a good technician, but ought to study composition.

Nicholson.—Technically good. While the pose is natural it is not agreeable—the clothes predominate over the face.

Apple.—Your negative is not suited for a gaslight paper. The scale of tones in such a paper is very short, and if you intend using it you must light with

less contrast and avoid black backgrounds.

Berkley.—An excellent piece of lighting and modeling. First-rate technic. Your background, however, is far too dark.

H. E.—A pleasing little effort. Its chief fault is the light patch in the background behind the neck and the lack of detail on the left shoulder.

Borry.—Head and shoulders are excellent, but the lower part has no character in the lines. I would suggest that you trim it just below the first button.

RULES.

1. Only one print to be submitted in any one month, and this must be from a negative made in the ordinary course of business within sixty days of the date it was mailed.

2. The pictures will be judged on the first day of each month, and all prints received prior to that date will be included.

3. Requests for private criticism, accompanied by fee of \$1, may be sent along with the print and will be answered after the judging is over.

4. Mark outside of package with the words "Portrait Competition."

5. Prints are not returnable.

PICTORIAL COMPETITION No. 80.

The flower competition is one of the most interesting of the year, partly on account of the beauty of the subjects and partly because they lend themselves to decorative treatment. As each year rolls on I find that our readers realize more and more the pictorial possibilities of flowers and so each competition shows an advance on the one before.

Before referring particularly to the prize-winning pictures I may point out that those who are not successful nearly always failed because they chose a background that was not suitable. Just to illustrate this point, there is reproduced a very charming arrangement of narcissus by Dr. Neuman, which at first the judges had selected for the prize list, but which, on mature consideration, they decided only came fourth because of the background being, in their opin-



Gust. Horlin,

FIRST PRIZE.

Chicago.

ion, too dark and thus conflicted with the tone of the blossoms, the stems and vase. The arrangement they considered to be particularly decorative and the lighting of the flower and vessel to be very good indeed.

The following are the awards:

First prize—W. H. Porterfield, 100 Lake View avenue, Buffalo, New York.

Second prize—Paul R. Morrison, Catskill, New York.

Third prize—James Thomson, 2 Mascoma street, Roxbury, Massachusetts.

Special mention—M. Neuman, George Alexander, Belle Johnson, Paul R. Morrison.

PARTICULARS OF WINNING PICTURES.

First prize—Made on Iso plate and printed in carbon.

Second prize—Made on Standard Extra, printed in Angelo platinum.

Third prize—Made on Stanley plate, printed in Kallitype.

CRITICISMS OF WINNING PICTURES.

First prize—Many of our readers

will remember that in the competition of a year ago we referred to the fact that Mr. Porterfield's prize picture was in two colors, being a new modification of the carbon process, and then explained that the picture would in all probability be very hard to reproduce. The same explanation is due in the case of the present picture, because the blossoms are in a light bluish yellow, while the leaves, stem and background are of a deep blue-green, a combination that is peculiarly effective to the eye, but one of the very worst that could possibly be selected for engraving from.

Little need be said about the second and third prize pictures, because each shows decided taste in arrangement. The second-prize picture was considered superior to the third on account of the delicacy of the lighting.

All the prize-winning pictures have this one point in common—variety in spacing and the grouping of many small details into effective masses. All are full of fine delicate gradation, and for

these qualities they obtain the honors they won. Each is a capital example of straight photography and all demonstrate that it is with many subjects unnecessary to destroy texture in the effort to secure tone value. Retouching a portrait is often necessary because of poor skill in lighting and I frequently think that fuzziness is necessary for the same reason.

PICTORIAL COMPETITION No. 81.

It does not necessarily follow that because a man kicks at what the other fellow does that he will start out and show how he would do it. A year ago I must have been the recipient of at least one hundred letters protesting against so many fuzzy pictures being reproduced in this magazine, and for several months afterward scarcely a day passed but I received a complaint along the same line. One and all I answered patiently, pointing out that the fuzzy pictures were less numerous than the sharp ones and that very frequently tone massing was mistaken for fuzziness, and that it was my business as an editor to show all kinds of work that was considered good by competent individuals.

Finding that my arguments had no effect, I determined to switch from the defensive to the offensive side of the fence and put it up to the kickers to show what they could do. I am afraid most of them have buried themselves in a hole, because they are rather conspicuous by their absence, and so we had a competition considerably smaller than it ought to have been and one in which there were remarkably few new names. The first prize, by the way, falls to an old-time competitor, while the second and the third go to new men. I will guarantee the sharpness of the definition in every case, although a good many will at first be inclined to declare that some if not all are fuzzy because of the massing of the tones. With many people lack of crisp detail in the shadows means fuzziness, but it does not.

This competition loses a great deal of its interest because of the stand made

by the painters' jury at the American Federation Salon, this distinguished body having decided that it was possible for a needle-sharp photograph to be pictorial.

The following are the awards:

First prize—Gust. Horlin, 260 Garfield boulevard, Chicago.

Second prize—K. Stoel, 158 South Prospect street, Grand Rapids, Michigan.

Third prize—G. E. Barber, Rawlins, Wyoming.

Special mention—James D. Reid, Fred Jukes, F. A. Preston.

PARTICULARS OF WINNING PICTURES.

None of the competitors gave particulars.

F. DUNDAS TODD.

FUTURE COMPETITIONS.

Competition No. 83—Lantern slides, any subject. Closes February 28.

Competition No. 84—Snow pictures. Closes March 31.

Competition No. 85—Waterscapes. Closes April 30.

Competition No. 86—Branch of a tree without leaves, with special consideration of decorative effect. Closes May 31.

Competition No. 87—Domestic animals. Closes June 30.

Competition No. 88—Genre pictures, or pictures that tell a story. Closes July 31.

Competition No. 89—Branch of a tree with leaves, with special consideration of decorative effect. Closes August 31.

Competition No. 90—"At Home" portraiture, that is, portraits not made in a studio. Closes September 30.

Competition No. 91—Snap-shot pictures. Closes October 31.

Competition No. 92—Landscapes. Closes November 30.

Competition No. 93—Flower pictures. Closes December 31.

RULES.

I. There is no restriction as to the number of pictures to be sent in. On the print there should be written the

sender's name and address, *but nothing else*. The outside of the package, in addition to our address, may bear that of sender. Accompanying, a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given; also the printing process.

2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

3. Prints are not returnable.

PRIZES.

First—Books to the value of \$5.

Second—Books to the value of \$2.50.

Third—Books to the value of \$1.

Any books, on any subject, or, if preferred, any article we can buy in Chicago.

AMIDOL FOR GASLIGHT PAPERS.

Quite a little battle royal is being fought in the current number of *The Barnet Photographic Record* over the proper way to make up and use amidol for gaslight papers. Metol-hydroquinone is undoubtedly the most used developing combination for this class of paper, but an amidol formula is here given on the recommendation of Mr. F. Sanderson, who has used it for many years past: Amidol, 2 grains; sodium sulphite, anhydrous, 6 grains; potassium bromid, 1-5 grain; water, 1 ounce. The amidol and sulphite are mixed thoroughly on paper and then "sifted" into lukewarm water, stirring briskly meanwhile. Unless the salts are sprinkled into the water in this way, it is sometimes difficult to get the sulphite to dissolve. The author of the formula seems to think that there is nothing particular in it, but that success with this developer rather depends upon the use of plenty of it and on always making up the developer at the time of use.

A second prescription of amidol for the development of bromids is given by another reader, as follows: Sodium sulphite, 1 ounce; potassium bromid, 5 grains; citric acid, 5 grains; amidol,



W. H. Porterfield,

Buffalo, N. Y.

FIRST PRIZE.

30 grains; water to 10 ounces. The citric acid is first dissolved in a little water, then the sulphite and potassium bromid in a separate portion. These two are mixed and water added to bring them almost to the bulk of ten ounces, at which point the amidol is added.

TONING BROMID AND OTHER DEVELOPED SILVER PRINTS.

CHAPTER II.

THE COLOR OF THE SILVER IMAGE (*continued*)—
DEVELOPMENT OF THE IMAGE—WARM
TONES BY DEVELOPMENT.

As was shown in the previous chapter, it may very likely be the case that the color of the image obtained on bromid or gaslight papers is either a greenish or rusty black or gray. The print as it stands in this case is useless. There are three or four methods of improving it by depositing on it some foreign substance, and these will be dealt with in their turn, but for the present consideration will be confined to a method of chlorinating the silver image, and then redeveloping it to silver again. This method is, on the whole, the best I know for the improvement of badly toned prints.

The procedure of bleaching the silver image of a bromid print and then redeveloping has been proposed for various purposes; but, as far as I am aware, it has not been proposed as a method of remedying "rustiness" and greenish blacks. It is certainly nothing like as well known as it deserves to be. Even images which are distinctly brown in color can be rendered an excellent black or gray.

To carry it out the prints should first be bleached in:

Potassium bichromate	90 grains
Concentrated sulphuric acid	
	200-400 minims
Sodium chlorid (common salt)	1 ounce
Water	to 10 ounces

The prints are sufficiently bleached after an immersion of from five to ten minutes in this solution. The larger the quantity of sulphuric acid present the quicker the bleaching. After bleaching, the prints are washed in water till all the bichromate is washed out. Some people have found it necessary to give prints bleached in a bichromate bath such as the above an alum bath previous to washing, in order to facilitate the elimination of the bichromate or chromic acid. This is very likely due to the fact that the actual bath used con-

tained too much bichromate and too little acid. At all events, I have never experienced any difficulty in washing the prints free from chrome stains; ten minutes or a quarter of an hour in running water has always appeared to be long enough. However, if any one is troubled with the necessity of prolonged washing, the alum bath will be found a complete remedy.

The following is an excellent redeveloper:

Metol	45 grains
Sodium sulphite	130 grains
Sodium carbonate	270 grains
Water	to 10 ounces

No potassium bromid should be used. It is very important in the case of the application of such a redeveloper to a chlorinated print to be on the lookout for silver sulphite complications.

The redeveloper must be so mixed as to dodge any chance of general fog being produced. The production of general fog in this case by the employment of an unsuitably mixed developer exhibits the fog-producing action of sodium sulphite very well, for here no general fog can be produced except by silver passing into solution. The action of the metol redeveloper just given is apparently so powerful and rapid that any silver sulphite solution formed is decomposed *in situ* at once.

Ferrous oxalate (one part of a saturated solution of ferrous sulphate added to six parts of a saturated solution of neutral potassium oxalate) is a very good redeveloper; but, of course, needs an acid clearing solution after it. There is not the same objection to the use of an acid clearing bath in this case as in the case of primary development, because the operation is not performed in the darkroom, and there is no fixing bath to follow.

There is, of course, no harm in fixing a redeveloped print, but it is quite unnecessary, and therefore better not to do so, for no unnecessary hypo should be ever introduced into a print. All that must be seen to is that redevelop-ment is complete; and this can be confidently assumed to be the case when

the print has been exposed to the action of the developer for a period of time twice as long as that taken to complete the visible effect. In case of doubt, however, fixing should be resorted to.

After redevelopment, the print, of course, must be thoroughly washed in water. The whole of the bleaching and redeveloping operations should be done in a normally lighted room.

Chlorinated bromid paper is readily redeveloped when quite unexposed to actinic light; but gaslight papers after chlorination are not so easily redeveloped under these circumstances. It does not appear that any definite and particular exposure to light is of importance, but a certain degree of exposure is advisable as helping the redevelopment; and, as I have just said, this can be most easily attained by performing all the operations in actinic light.

Silver iodid is not suitable for redevelopment, owing to its stability; and silver bromid, which is also more stable than the chlorid and harder to reduce, does not give such pure blacks and grays.

Silver ferrocyanid will with a suitable developer, as the metol formula above given, yield good black and gray tones; but ferrous oxalate does not give such good results with silver ferrocyanid as it does with silver chlorid.

A suitable bleaching solution for converting the silver of the image into silver ferrocyanid is:

Potassium ferricyanid	....140 grains
Ammonium bromid	.....180 grains
Water	.....to 10 ounces

After using this, the print must be washed in water till no yellow color remains in the print. It is, of course, possible to bleach and redevelop a second time; but I have never observed any advantage from doing so.

The chlorination and redevelopment of a silver image by the methods just advised, besides improving the tone, cause a slight but undoubted intensification. The state of the aggregation of the silver molecules is altered to some

extent; and so not only is the color of the deposit altered, but its body or covering power is also increased.

If P. O. P. be printed slightly darker than when gold toning is going to be resorted to, and then simply washed and fixed and again washed, it can be bleached in the bichromate-chlorid bath, and then the silver chlorid reduced to metallic silver with the metol redeveloper. The print finally obtained by this proceeding has a black silver image. The tones, however, as a rule, are not good, but can be improved by subsequent treatment. This method of dealing with P. O. P. is probably only of theoretical interest.

Having dealt with black silver tones, let us pass to warm colored ones. Here it is best to invert the former order of consideration, and to deal first with gaslight papers. The silver haloid contained in the emulsion on these papers is either wholly or chiefly the chlorid.

Now, silver produced by the reduction of silver chlorid, by varying the method of reduction, can be made to assume different states of aggregation, and so to appear in many differently colored forms. Gaslight papers can be so exposed and developed as to yield images of many colors. The conditions for the production of warm-colored images are overexposure and development, with either a much-diluted and restrained phenolic developer (metol, amidol, etc.), or else, which is much better, the ferrous citrate developer.

When warm-colored prints are desired, the quality of paper used should be that adapted to give rather hard, contrasty effects when black tones are produced on it from ordinary negatives. The exposure for warm colors must be made to suit the actual developer used. The contrasts obtainable must be made the first consideration, and not the tone, just as in the case where black tones are produced. If with any developer suitable rendering of contrast can not be obtained at the same time as the desired tone, the developer must be changed. Of course, with some negatives a longer exposure can be given

than with others without spoiling the gradation of the contrasts.

As the longer the exposure is with any developer, the warmer becomes the tone, so the tone obtained from some negatives will be warmer than that obtained from others, the developer remaining the same.

The following is a developer which will be found suitable for warm-colored images:

STOCK SOLUTION I.

Hydroquinone	30 grains
Metol	8 grains
Potassium bromid	1 to 2 grains
Sodium sulphite	200 grains
Sodium carbonate	290 grains
Water	to 10 ounces

STOCK SOLUTION II.

Ammonium carbonate ...	$\frac{1}{2}$ ounce
Ammonium bromid	$\frac{1}{2}$ ounce
Water	to 10 ounces

In order to show the method of employing this developer, the following examples are given:

BROWN TONES.—Exposure about four times normal.

No. I	1 $\frac{1}{2}$ ounces
No. II	70 minims
Water	to 10 ounces

WARM BROWN TONES.—Exposure about six times normal.

No. I	1 ounce
No. II	190 minims
Water	to 10 ounces

VERY WARM BROWN TONES.—Exposure about eight times normal.

No. I	$\frac{1}{2}$ ounce
No. II	$\frac{1}{4}$ ounce
Water	to 10 ounces

RED TONES.—Exposure about ten times normal.

No. I	160 minims
No. II	100 minims
Water	to 10 ounces

In using a ferrous citrate developer, the following solutions will be found serviceable:

STOCK SOLUTION I.

Ammonium citrate	3 ounces
Water	to 10 ounces

It is as a rule best to filter this solution, as the ammonium citrate generally met with is somewhat dirty.

STOCK SOLUTION II.

Citric acid	3 ounces
Water	to 10 ounces

STOCK SOLUTION III.

Ferrous sulphate	3 $\frac{3}{4}$ ounces
Concentr'd sulphuric acid.	25 minims
Water	to 10 ounces

STOCK SOLUTION IV.

Sodium chlorid (common salt)	1 ounce
Water	to 10 ounces

The following examples of the use of the above solutions are given:

BROWN TONES.—Exposure about four times normal.

No. I	3 ounces
No. III	1 ounce
No. IV	10 minims

No. IV is best added by means of a dropping bottle.

WARM BROWN TONES.—Exposure about six times normal.

No. I	2 ounces
No. II	1 ounce
No. III	1 ounce
No. IV	10 minims

The small quantity of sodium chlorid in the above formulæ restrains development somewhat, and prevents a tendency to the production of uneven tones which generally shows itself in the absence of this substance. By increasing the amount of salt present in the developer, we can lengthen the exposure and obtain warmer tones, e. g.:

RED TONES.—Exposure about nine times normal.

No. I	2 ounces
No. II	1 ounce
No. III	1 ounce
No. IV	100 minims

Yellowish tones can be got by both the phenolic and ferrous citrate developers by still further modifying the formula used from that required to yield red tones. Very few, if any, are, however, likely to care for yellowish tones.

If colder tones are desired than are given by the first formula, the ammonium citrate solution can be partially replaced by a saturated solution of neutral potassium oxalate. Instead of using 3 ounces of ammonium citrate, 2 $\frac{3}{4}$ ounces are used, and from $\frac{1}{8}$

to $\frac{1}{4}$ of an ounce of the potassium oxalate solution added. The exposure in this case will be about three times the normal. No clearing bath is necessary with any of these citrate or citro-oxalate formulæ, but the prints must be well washed in water before fixing.

In an article in *Photography*, April 25, 1903, page 407, attention was called to the fact that by substituting in the normal developer acetone sulphite for sodium sulphite, warmer tones can be obtained. A formula giving warm black tones with gaslight papers is:

Edinol	32 grains
Hydroquinone	32 grains
Acetone sulphite	96 grains
Tribasic sodium phosphate.....	512 grains
Potassium bromid	5 grains
Water	to 10 ounces

The production of warm tones by development on gaslight paper is quite an easy and satisfactory process, although, as is only natural, it requires a little practice at first before the best results can be obtained. In the case of true bromid papers, however, it is not easy to obtain really warm tones in this manner.

It is easy enough to obtain warm black tones if such are admired. Suitably extended exposure and restrained development (i. e., development with an abnormally large quantity of potassium bromid in the developer) will yield such tones; but there is a danger, at all events in the case of some developers, of getting greenish results. The use of acetone sulphite seems to be the best plan at present available.

Mr. Wade in the above-quoted article gives one of the best formulæ yet given for this purpose. It is:

Edinol	20 grains
Acetone sulphite	120 grains
Potassium carbonate	150 grains
Water	to 10 ounces

Another on the same lines which works well is:

Aduroil	30 grains
Potassium bromid	2½ grains
Acetone sulphite	135 grains
($\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$) ..	"
Water	to 10 ounces



M. Neumann,

San Francisco, Cal.

The exposure must be varied to suit the tone as much as possible. Brown tones can be obtained on true bromid paper by using the metol-hydroquinone-ammonium carbonate developer given above. As an example:

No. I.....	4 ounces
No. II.....	¾ ounce
Water.....	to 10 ounces

will serve. About four times the normal exposure is required. The ferrous citrate developer may also be employed.

The method of obtaining brown tones on true bromid paper by development has not been much worked with, and not much is apparently known about it.

All I can say is that in my hands the method has never yielded pleasing results, and I do not think it is of much practical value. Only hard negatives are suitable for producing brown prints.

Some attempts at different times have been made to obtain warm tones on bromid and gaslight papers by bleaching the black or gray silver image to silver chlorid, and then redeveloping with a developer of the kind used for producing warm tones on gaslight paper by primary development. The method certainly, on the face of it, looks very promising, but very little has come of it so far. Gaslight papers appear to give the best results.

Probably the lasting quality of a bromid print which has been carefully prepared and washed is much underrated by a good many people. A print normally developed from a rapid coarse-grained emulsion will certainly keep in splendid condition under ordinary circumstances for a great many years. Future experience will alone determine exactly how many. Though we can not at present say anything very definite, there is good reason for believing that the probable life of a print will vary with the size of the silver particles forming the image. Certainly, the smaller the particles the more easily is the image acted on by chemical reagents. When normal development has been carried out, following a normal exposure, the size of the silver particles varies with the grain of the emulsion. With such prints, therefore, the lasting properties will probably vary with the emulsion from which they have been made. The warm-toned images produced by modified exposure and development being of finer grain will in all probability be found to be inferior in permanency to the normal black ones.

PERSULPHATE REDUCER.—Ammonium persulphate, 10 to 20 grains per ounce. Make fresh for use. To stop the action, place negative in five per cent sodium sulphite solution. If much reduced fix again. This is a good reducer for a negative that is too contrasty, as it acts principally on the high lights.

BACKING PLATES.

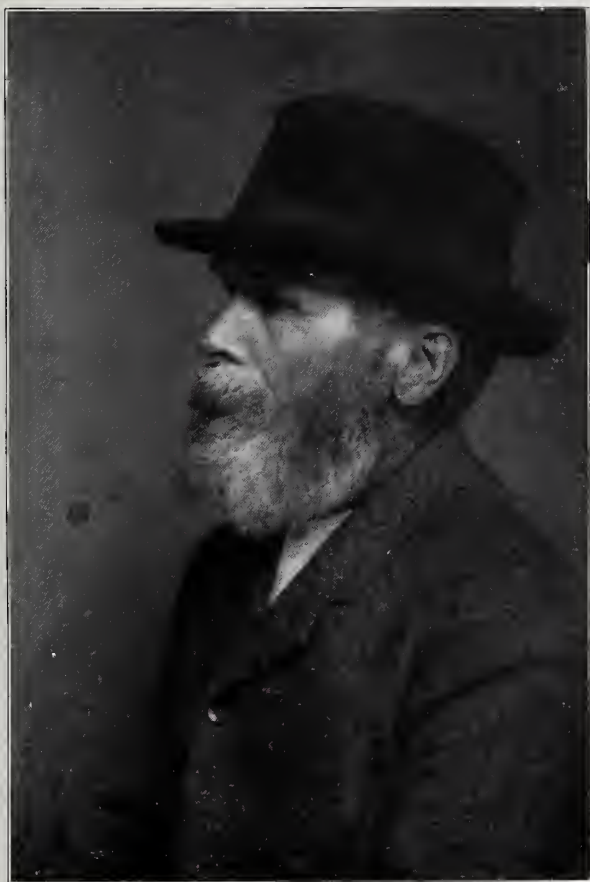
Lately I read the following in *THE PHOTO-BEACON*: "To prevent . . . halation, the rays that reach the back of the plates must be absorbed, and this is done in various ways, the one most generally known being to coat the back of the plate with some substance that will absorb the actinic rays and thus prevent reflection. The operation is rather a mussy one, and so very few people care to tackle it." (November, 1904, p. 352.)

It is to be regretted that backing plates has got such a bad reputation; I think unjustly, although I can well appreciate why many consider it a "mussy" job and do not "care to tackle it."

Some years ago, having read a good deal about backing plates, I determined to try it. I just had some of Gihon's opaque on hand and brushed a little on the backs of two plates which I intended to use for copying pictures to make lantern slides. I was delighted at the result, the clearness and distinctness with which even very fine lines were reproduced. I determined to keep on backing plates. Next I used the widely known gum arabic, caramel and burnt sienna backing, and once, but only once, caramel and lampblack. The photographic results were all right, but with these backings there was the "mussy" job of cleaning the backs of the plates before development. Next I thought of pasting dark papers on the backs of the plates. Now this is not a bad plan and certainly not mussy. But it has some drawbacks. Sometimes there may be too large a quantity of moisture, if the plates are not immediately used, but put into a plate box; and if they are immediately used the moisture may cause some unevenness of the partitions of the plateholders. Moreover, on drying, portions of the paper may leave the glass and to that extent leave the plate unbacked. Besides it is not easy to get the paper all around in close contact with the glass; usually some air bells may be found between the paper and the glass.

How to get over these difficulties was the next question. I next tried caramel and added just enough of ordinary flour to make it somewhat more consistent, so that it would not run. This I brushed on the back of the plates and

mediately developed with the backing. The caramel and flour have no chemical effects on the developer or the fixing bath, and the tissue paper comes off of itself during development. The developer and the fixing bath will become



THIRD PRIZE.

then let the plates drop on ordinary dark red or black tissue paper, which one may get at various stores. Then I took a dry rag and rubbed the tissue paper well on the back of the plate. After rubbing a little while the plate was practically dry and could be used immediately, the tissue paper had absorbed the moisture and formed an additional backing.

After exposure the plate could be im-

mediately developed with the backing, colored by the caramel, but this is no disadvantage, but rather a benefit; it helps to protect the plate from light. In fact, plates covered with developer well colored by caramel may be developed in rather strong light. If the caramel has any influence on the development, it might be as a physical restrainer. Like bromid, chemically, so honey, sugar and caramel, which is but roasted sugar, physically retard somewhat the develop-

ment. But this also is rather an advantage.

I was well pleased with this plate backing all around, the only drawback was that the caramel and the flour had to be mixed frequently, perhaps every week once or twice. Caramel alone keeps indefinitely and so does flour if kept dry, at least for a very long time, but if mixed the flour soon gets moldy.

Some time later I read Chapman Jones' "Science and Practice of Photography" on plate backings. After mentioning a number of them, he says: "Mr. W. E. Debenkam has shown that a mixture of caramel and gelatin is superior to any of these."

Taking this hint, I tried caramel, saturated solution, 1 ounce and gelatin 15 to 30 grains. This I have been using of late and expect to continue to do so. After brushing this backing on the plate I add the tissue paper just as with the caramel and flour backing.

Caramel and gelatin seem to keep indefinitely, at least I have not yet noticed any molding or spoiling. At about 85° F. gelatin melts. Below that degree the caramel and gelatin gradually become jelly-like. For use, slightly warm them in a water bath to make them liquid. Soon after they are brushed on the back of the plate they cease to be liquid and the tissue paper will soon extract the rest of the moisture so that the plates may be used immediately. A number of plates may be backed within a few minutes. In putting them face to face into the plate box it should not be forgotten to put some pieces of newspaper between the backings, that they may not stick together. Also care should be taken that no caramel and gelatin will get on the film side. If this should happen, quickly and carefully wipe them off with a clean, dry rag.

After having for years used both these plate backings—caramel, flour and tissue paper and caramel, gelatin and tissue paper—I am sure no reader will find their use "mussy" or troublesome. The first mentioned gradually comes off the plate of itself, and the second may be easily scraped off with a

knife or some newspaper during washing. The materials for making them are cheap. A pound or two of common white sugar will make enough of caramel to last for years. Gelatin and tissue paper may be had at nearly every drug store or photographic supply house.

J. GMEINER.

THE 1905 KODAK COMPETITION. \$2,000 IN PRIZES.

To the average amateur this ought to be the most interesting kodak competition that has yet been organized, because it has a section for novices, that is to say, those who have never been awarded a prize in any photographic contest. Those eligible for this department should at once make a start, because, in preparing for a competition, it is almost impossible to begin too soon. The best plan is to lay aside, as soon as it is made, any print that is thought to be specially good, so that when the time for sending in comes there will be quite a choice on hand. The contest closes in this country on November 1, 1905.

LABELS ON BOTTLES.

"Can you tell me," asks a correspondent, "how I can prevent the labels from my bottles dropping off? I am obliged to keep my solutions in a damp cupboard, and I suppose this is the cause of labels not sticking." A label will adhere to the bottle for a lifetime, and will not be injured even by acids, if protected in the following way: A coating of size is first given to it. Swell a little cooking gelatin in cold water and make it fluid by placing the vessel containing it in a dish of nearly boiling water. This gelatin coating having dried, apply a single coat of good "church" or "oak" varnish, which will dry in a few hours and will protect the label far better than the quick-drying varnishes. If the querist has visited chemical laboratories he will probably have noticed that the labels are protected in this way, and I can myself vouch for the fact that ten years' use of the bottles thus treated still leaves one in no doubt as to their contents.

MULTIPLE IMPRESSION, CHROMATIC PRINTING, AND OTHER EXPEDIENTS IN GUM-BICHROMATE.

When the negative is perfection, the paper properly sized, the pigmented layer correct in its richness of gum and color, and finally the exposure in the frame is exact; then every gummist ought to obtain a complete impression by a single printing: a print in which the half-tones are transparent and fresh, the blacks mellow and deep, an impression to which a second printing could add no power.

It is, however, by no means allowable to consider multiple printing as a happy means by which a lack of skill on the part of the practitioner is to be covered; we must, on the other hand, consider that multiple impression has a widely different and more elevated aim, it being a method affording new resources and leading to new powers or developments.

In other words, we are not contented to regard the method of successive layers or printings as a means of augmenting the vigor or intensity of the subject as a whole, but we regard the method of multiple printing as something that makes it more easy to practice local development or the accentuation of parts of the subject, and something that also makes it possible to ally polychromy to gum-bichromate.

SECTION I.—MULTIPLE PRINTING, TONE UPON TONE, OR SINGLE TONE.

In the negative, some of the tone values may be misplaced, and certain of them may need to be modified in order to secure justness in effect, or esthetic harmony of the whole. For example, in a landscape negative, the sky may be too opaque, and the far-off planes may not be sufficiently differentiated from the near distance. Again in the case of a portrait negative, it may happen that the background has a value identical with that of the hair, that a garment is too white, or a shadow overaccentuated. In such cases local development should put the matter right.

It is apparent enough that local development (or, to speak more exactly, removal of material) may be performed

after a fashion when there is only one printing, but the plasticity of gum-bichromate is not absolute; and even to avail oneself of such plasticity as exists, the worker must have a quick perception and a deft hand. By adopting the method of multiple impression, tone upon tone, the work will be facilitated in many cases. Let us give some examples.

(a) *First Example.*—Let it be supposed that we have a landscape negative with clouds in the sky, but the opacity of the sky is such that if we print for the sky with full tone rendering, the landscape is overdone and black, while if we print for the landscape, the sky is white and without details.

Let us print twice: first we lay a sensitive ground, which is fine and delicate, and we so regulate the exposure as to suit the opacity of the sky. In developing, we only concern ourselves with the sky, leaving the landscape to care for itself, and, the sky being satisfactorily developed, we lower the distances by means of the brush, we obliterate or wipe away the foremost planes with the sponge. Let the print dry, alum it and wash.

We next lay another ground of sensitive mixture, this time rich in gum and in color, the exposure for the second printing being based on the requirements of the landscape. As soon as the landscape portion is properly developed, the sky is sponged so as to lay bare the first impression, and now the brush is used according to the necessities of the case so as to establish accord or harmony between the various planes of the scene.

(b) *Second Example.*—Let it be supposed that the operator has erred in focusing his landscape, or that he has used a hand camera adjusted for infinity, so that the forward planes are less sharp than the distance and the sky.

We now set to work much in the same way as already described, but in making the first impression, which should include the sky and all the over-sharp distance, a sheet of gelatin or celluloid should be interposed between the negative and the paper, so as to tone down the extreme sharpness of

the hinder planes. In the second impression, the forward planes are printed without the intervention of sheet gelatin or celluloid between the negative and the paper.

(c) *Third Example.*—We have now, let it be supposed, a portrait that lacks harmony, the negative being bare and hard, and we wish to tone down the undue contrast.

A first printing is made with a thin coating of pigmented gum, and the paper must be decidedly underexposed in the frame, the result being, with mild development—stopped when the film begins to soften or flow—a flat gray or weak impression. Upon this is performed a second printing, which must be a vigorous impression, a little overexposed, and this solves the problem.

Let a contrary case be supposed: a weak, monotonous negative which gives a print having no accentuation. Make a first impression, and without touching those parts where the tone is to be raised, use the brush to clear away all the other portions. Now make a second impression, and in this way we shall have created the required contrast by the underlays.

This section might be prolonged considerably without including all cases in which double printing may be useful in a somewhat similar fashion, and although we have not specially touched on the facilities which the method offers for the treatment of backgrounds, we may pass on to the next section.

SECTION II.—PRINTING IN DOUBLE TONE.

It has been explained above how one may print tone upon tone, but occasionally much more agreeable effects are realized when the tints of the two successive layers are not precisely the same, but very near neighbors in the spectrum scale, an expedient often resorted to in typographic printing. For example, the black may be printed on a ground of bister, bister may be printed on a red ground, red on a yellow ground, the color that is most pronounced or striking (*chantante*) serving for the first impression.

Naturally it by no means follows that

in order to obtain a double tone the development should be automatic; indeed, it is necessary to develop the print locally at each impression, let us suppose by means of the brush. If a mistake is made, and there is a lack of harmony in the print, one may resort to a third printing, and for this third printing a tint intermediate between the two previous tints may be employed.

The combinations of tint are in their nature arbitrary. If a print is looked at from a distance, it may appear as of only one color, but if regarded from a position corresponding to normal vision, one ought to be able to distinguish the tints as slight modulations, but as nothing more.

SECTION III.—MULTICHROMIC PRINTING.

Instead of only employing two or three tints that are very near to each other in the chromatic scale, one may compound the layers with quite distinct colors, as, for example, the three primaries of ordinary heliochromy, yellow, red and blue. Discriminative selection of the subject is obtained by the ordinary photochromist in a scientific manner with a triad of negatives obtained under color screens, but we make the analogous selection by means of the brush.

I say analogous selection, although there is some difference, as the aim of the photochromist is to obtain the exact colors of nature, but we can make no pretense of so doing: moreover, we only have one negative. Hence it is that we only attempt to obtain a conventional effect of color; we aim at an arbitrary harmony that shall be pleasant to the eye.

By making use of yellow, red and blue, and adding to the result a fourth impression in neutral tint (this being quite indispensable in practice), we are able to obtain a complete gamut of tint as a result of the correct combination of these four colors.

In order to make this matter clear, let us take an example.

I have at the Photographic Salon a print, No. 66, profile in four colors, this having been produced by the following operations:

The first layer or coating was red, the pigment being a mixture of venetian red and brown red, the mixture for this layer having been compounded in the normal or ordinary manner. In the production of this first impression the whole of the development was effected with cold water, and at the end of the automatic development the following selections were made:

The whole of the figure (i. e., the flesh) was left intact.

The hair was considerably lowered by means of the brush.

All the rest was wiped off with the sponge.

The second layer. This was of a neutral bister tint, and was compounded of raw sienna, burnt sienna and burnt umber, but with a dash of red and a dash of black. The chief use of this layer is to render the hair; consequently, at the end of the development the following was the order of action as regards the second image:

The second layer was left intact as far as the hair is concerned.

It was removed from the flesh portions.

It was considerably reduced on the cap and the neck-dress (fichu).

Third Printing. This was in yellow (cadmium and chrome), and the result of printing was only allowed to remain on the background.

Fourth Printing. The film was pigmented blue (cobalt toned down with Payne's gray and a dash of carmine). This impression was left intact on the face, the head covering, and the neck-dress (fichu), but it was partially removed from the hair and the background.

To sum up, it will be seen that:

The flesh is rendered by an under-layer of red chalk tint, surfaced with blue.

The hair is weak red chalk tint (lowered by the use of the brush) underneath, next an intact impression in bister, and a faint surfacing with blue.

The cap and the neck bands were in bister as a base, this being lowered by the pencil, then an intact impression in blue.



Paul R. Morrison,

Catskill, N. Y.

SECOND PRIZE.

The background: First an intact impression in yellow, then bister and blue, lowered by the brush.

The other exhibit at the Photographic Salon, No. 60, "An Arrangement in Yellow and Blue," and also the head of a young woman, was produced in a somewhat different manner.

After two printings, one in red, the other in brown, and both selective, or treated with the brush, I made a third printing in prussian blue.

The prussian blue adheres strongly to the paper, and this impression was worked with the brush in such a way as to model the hat and the neck-dress (fichu).

This done, in order to put the whole in balance, I decided to put into the

background a contrasting note of pure cadmium. By means of a flexible strip of white wood, cut so as to form a sort of graver, I worked on the moist sheet and cut away the background, so as to remove the film and also the sizing of the paper.

Next I printed a layer of cadmium, and this was sponged off everywhere, except on the background, where the color was very tenaciously held by the bared paper. By thus scraping the paper, there is obtained an effect like that of pastelwork.

I have already made a score of prints of this kind, and all are of a different tonality. It is as if the eye in the course of a series of impressions is impelled to modify the color of the successive impressions.

My palette includes ivory black, lamp-black, cobalt blue, ultramarine, prussian blue, venetian red, brown-red, carmine, burnt sienna, raw sienna, cadmium No. 4, yellow ocher, bistre, burnt umber, indigo and Payne's gray, and hitherto I have confined myself to figures, in this class of work.

I commence with the red and I endeavor to obtain this impression quite fully modeled and also vigorous. The red serves for the flesh, and I leave it in for the hair and, generally, on all parts which in the end must be intensely black (e. g., velvet or dark satin), and I also leave it to form part of dark backgrounds.

The second printing is in a neutral tone, and this may tend toward bistre or toward gray. This serves for the hair, the shaded portions of drapery or the background; but I suppress it as far as the flesh is concerned.

The third printing is in yellow. The two previous printings having left the paper intact in the high lights, the third layer will tend to fix itself on these intact portions, and as the yellow does not adhere well to the portions already covered, it can be removed by a sponge, if considered desirable.

After the three printings, the sheet ought to be entirely covered, and it ought to be complete, as far as rendering values is concerned. Looked on

simply as color, it may be a harlequin or incongruous, but almost exact in values.

It now, and in reference to the fourth printing, becomes necessary to consider the work with close attention, in order to determine, by a study of the motive or idea (*pensée*), what is the tint of blue that can introduce harmony into chaos and bond together all the three elements into a completed whole.

Often I hesitate for a long time, and set the work aside for some days before finally deciding. Hence it is that the fourth color is always complex in its composition. This color is a blue, but a blue which may tend either toward green or toward violet. Cobalt blue, ultramarine, prussian blue, indigo, carmine, venetian red and yellow may all come into the composition of the tint. Obviously the last printing should be transparent, or but lightly charged with pigment.

This last injunction may be generalized by saying that the colorific intensity of the coatings should diminish from the first to the last.

In conclusion, I must point out that the method which I describe is interesting in a high degree, and it is not difficult in its application; nevertheless, it requires and supposes certain conditions: first, a sure and certain mastery of the gum-bichromate method; second, skill in the handling of color; third, a just eye. In other words, this work is not for the mere beginner.—*The Amateur Photographer*.
MAJOR C. PUYO.

THE RETORT COURTEOUS!

I was told a very smart thing about the free sitting business during the past week, which I can vouch for as being true, and will no doubt interest you and your readers. A well-known and very popular clergyman was down at one of the seaside resorts, preaching and lecturing. The tip-top photographer of the place wrote and asked for a sitting. The reply was brief: "Is thy servant a hen that he should do this thing?"

W. E. DIXON.

POSITIVE OR NEGATIVE ENLARGING, AND SOME APPLICATIONS.

In the October number of one of the leading German photographic magazines, the *Photographische Mitteilungen*, Dr. O. Doerffel discusses the former part of this subject very interestingly, and in this article I will endeavor to retain the gist of his remarks, besides

objectives are being used, which make it possible to easily enlarge the pictures one secures many times. The advantage can be plainly seen. Large apparatus is always a heavy burden on a journey; on the other hand, one can easily carry with one, without inconvenience, a little camera; nor does one have the accompanying worry of packing and unpack-



Barber,

THIRD PRIZE.

Rawlings, Wyo.

venturing a few suggestions of my own. He begins by asserting that the fact is daily more generally recognized that direct positives do not reproduce the face of nature satisfactorily. A single projection (on a screen) of such a positive, will easily convince one that such is the case (he continues), and that only the enlarged picture is really a picture. This is the reason why enlarging apparatus is being so generally adopted. If one use such apparatus, one has the further advantage of being able to dispense with a large camera, even if one wishes to get quite ambitious pictures. More and more small boxes with fine

ing, setting up, and, as sometimes happens, the insertion of the objective. But opposed to this we have the labor of enlarging. Such works, however, should be pleasure. When one sees first in projection or in development the little miniature unfolding into an actual depiction of the scene, one is already well repaid for one's trouble.

These things, however, are common knowledge with which every amateur who has made any progress is acquainted. But the circle is not yet so wide that repetition of them will do any harm. Most of us dread the large amount of effort involved. But they

will find themselves in error. The labor is not great, and very small in view of the results obtained.

Three methods of enlarging are offered: One may use one of the enlarging machines which can be purchased, and which are generally arranged for the enlargement of a given picture a certain number of times; or one can convert his own camera, if the bellows be long enough, and enlarge by means of day or artificial light; finally, one may use a projecting lantern. I may say here that the general objection to the apparatus offered for sale is the limitation—first, as to the size of the negative to be enlarged; second, as to the degree of enlargement. Only in the expensive and elaborate machines can any range be obtained. However, a discussion of methods of working is foreign to the subject and is discussed in detail by every manual of photography. The question is, however, whether one should enlarge directly from the negative, and in that way obtain at once an enlarged positive picture, or should make first a contact glass positive, and from this an enlarged negative, and, lastly, from this positive contact prints.

Frankly, to bring the thing to a head, I am in favor of the latter process. It recommends itself for the following reasons:

If the enlargement is made directly from the negative, it must be made on some form of bromid of silver paper; and ergo, only bromid prints can be had by this method. Now, for landscapes and also for portraits, the cold gray black of the bromid print is not at all appropriate or pleasing. One seeks naturally for warm tones. True, there are methods by which these can be obtained in bromid prints, but the range of tones is limited, and by the toning process the nature of the picture (or its charm, if you will) is often altered very much, and, "last, not least," as the doctor puts it, these tone values so obtained have their spots and heavy dark places. Sulphur toning, which yields sepia values, is unreliable. One does not often succeed. Besides, by its use the picture is

weakened. On the other hand, uranium toning strengthens the image and does not give clear whites. Nor is uranium toning permanent on exposure to the light. Yet more difficult is the change from the uranium to the ferric blue tones. The beautiful middle tones, sepia, olive and green, one can not as a usual thing obtain with satisfactory clearness or fix evenly.

The use of bromid paper for enlarging therefore carries certain limitations with it. If one, on the other hand, make a contact positive (preferably on a special plate adapted to such work), and from it an enlarged negative, one is free from all these limitations and can choose his medium with perfect freedom.

Here the objection is raised that in the making of the two contacts all detail of the original is lost. This objection is not good. On the contrary, the opposite is true, so far as my experience goes. The doctor recommends a certain foreign brand of plate, which he finds especially good, but a momentary consideration of the subject, I think, will enable most of us to believe this assertion is generally true. The surface of glass is much smoother than even enamel bromid paper (leaving out of account the fact that enamel bromid is anything but an artistic medium to begin with), and, moreover, the grain of a slow copying-plate is exceedingly fine, so that in the first contact, with care, we can preserve all the detail and perhaps improve the quality of the positive (as compared with the original negative) during the operation. And in the enlargement of the small positive, care may well be taken which would hardly be justified in the making of a single bromid print.

We have then by this latter method an enlarged negative with printing qualities as good as the original and perhaps better. From this we can obtain any number of copies, and we can modify, alter or change the character of these as freely as we could those from the original negative, and, to use the comparison again, perhaps more freely, for the scale of sizes is larger and the work on the negative, which some workers delight in

so much, is not nearly so delicate and difficult.

Nor is the facility by which a number of uniform enlarged prints can be obtained by this method, with the minimum of effort, a factor to be despised. What the situation is in Europe I do not know, but in America there are generally some ten or a dozen exhibitions and competitions in progress at the same time—I saw a list of twelve the other day—and if your ambitious amateur who is outside of the Secession wishes to become famous he can not do better than make a contribution to each. And there is the fact that some particular print is generally dearest to the heart of the amateur at a given time. The dollar and penny question is one not to be looked at askance by the average amateur. Even though his purse be ample, the field of photography is so large; apparatus, new lenses, etc., come high, and there is a certain satisfaction in re-investing in photography what one has won by skill in the art.

Large prints are in greater demand every day for magazine covers. Indeed, I am surprised that the photographic magazines have not more generally adopted this plan. Nothing could be more attractive on a news-stand, except, perhaps, some very expensive colorwork or noted artist's drawing. Weekly class periodicals (of which there is a very great number) are adopting this method, and publishers of fine catalogues often use it. Only lately I have received a request from a company making "wood-fiber plaster" for a typical woodland scene, a class of which every amateur of any pretensions is sure to possess several specimens.

The ever-increasing vogue of photographic reproductions has brought the artistic original to the front, and now that the Christmas season is at hand a good local picture (not of some statue, etc., understand, but of a typical landscape, artistically treated) will find ready sale at the art stores if exact duplicates can be furnished. The application of the latter clause of the above sentence is obvious. OSCAR VON ENGELN.



Fred Jukes,

Rawlins, Wyo.

STRIPPING NEGATIVES.

DESCRIBING A NEW AND SIMPLE METHOD OF REMOVING THE FILM FROM THE GLASS.

USEFUL FOR REVERSING NEGATIVES, REPLACING BROKEN GLASS AND ENLARGING THE FILM.

In order to remove the gelatin film of a negative from the glass which supports it, the usual practice is to harden the film with formalin, and then to strip it by means of hydrofluoric acid. The plan is not without its drawbacks. In the first place we have to use formalin, which has a very irritating odor, and gives off injurious vapor, hurtful especially to the eyes. [We give our contributor's own words, but we can not help thinking that this particular objection is a little overdone. Used at the strength at which photographers employ it, formalin is not offensive or troublesome.—Ed.] The action of the formalin also is not sufficient in all cases to prevent a partial expansion of the film when it is placed in the acid bath to strip. Moreover, hydrofluoric acid is a compound which has to be kept and handled with very special precautions.

The method described below is cheaper, more certain, and reliable in its action, and involves the use of no substance that is injurious to health. I propose in this article to give a detailed description of the method, and to point out certain things which must be attended to if the process is to be worked successfully.

THE FINEST HARDENING AGENT — BASIC CHROME ALUM.

The operation depends upon the employment of basic chrome alum to harden the gelatin. This substance has a much greater hardening action than ordinary chrome alum, as I pointed out in 1902. The basic chrome alum is made by adding to a twenty per cent boiling solution of ordinary chrome alum strong ammonia until a greenish precipitate is permanently formed. This gives us a solution of the basic chrome alum, which in half an hour will harden a gelatin film so effectively that it will stand treatment with boiling water without expanding.

A HINT USEFUL WHEN HARDENING NEGATIVES.

Before treating it with this solution, it is most important to soak the negative thoroughly in water — for this reason. If a dry negative is placed in such a liquid, the surface of the gelatin is hardened so quickly that the fluid is unable to reach that part of the film which is next the glass at all, and so when the film is ultimately stripped the unhardened undersurface will expand. On the other hand, if the plate has been soaked in water first, the chrome alum has time to go right through the film before its outer surface has hardened and become insoluble. As a matter of fact, this is the case with all hardening agents, such as ordinary alum, formalin, and so on; and whichever is used, it will be found that the action is much more powerful and complete if the plate is first allowed to soak in water, and then placed in the hardening bath. While, according to MM. Lumière and Seyewetz, all the salts of chromium, especially in a basic condition, have an identical action in rendering gelatin insoluble, I have only succeeded in the manner described by

using basic chrome alum. It is true that all the chromium salts precipitate gelatin, but this effect is undone by acids, which is not the case with basic chrome alum. Chlorid, acetate and tartrate of chromium, rendered basic, have all been tried, but with none of these salts is it possible to strip the film without considerable expansion; while with basic chrome alum, suitably prepared and allowed to act for a sufficient time, the film will be found to keep its original size perfectly.

STRIPPING FILMS WITH SODIUM FLUORID.

For several years I have made experiments as to the possibility of substituting an alkaline fluorid (sodium or potassium fluorid, not ammonium) for the hydrofluoric acid for stripping. A five per cent solution of an alkaline fluorid may be kept indefinitely in a glass bottle, and is quite innocuous. For use a little of the solution is poured into a dish of celluloid, papier-maché or wood, and a little dilute (one or two per cent) sulphuric or hydrochloric acid is added. The film soon begins to strip. This stripping is caused by the formation between the gelatin and the glass of a gas, silicon fluorid.

There is no other method which will be found so efficacious as this. The use of a solution of a carbonate or of a bicarbonate, followed by an acid bath, has been recommended, but it will be clear that in this case the gas is given off, not between the glass and the film, by the stripping solution acting on the glass itself, but in the body of the film by the acid and carbonate solutions in which it is soaked coming in contact with each other. The actual stripping effect of such a treatment is very slight, and its efficacy is not very apparent. If the hardening of the film is very great, it can often be detached without any special stripping solution by merely loosening it with the fingers after putting the plate in tepid water. This method, if simple, is not very sure, for one often finds patches where the adhesion is much stronger, and there is consequently a risk of damaging the thin, tender gelatin skin.

A SIMPLE METHOD OF PREPARING BASIC CHROME ALUM.

A simplification of the usual method of preparing a solution of basic chrome alum has been published by Dr. Spilimbergo (*Il Progresso Fotografico*, 1904, No. 7). This consists of adding granulated zinc to the chrome alum solution. After they have been allowed to react for a few days, the excess of sulphuric acid in the chrome alum, and also a part of that which is combined with the chromium, is taken up by the zinc, being partly changed into soluble zinc sulphate, the presence of which in the solution is not material. The solution should be kept in contact with the zinc, this being left in the bottle, and the liquid poured back into it after use.

ENLARGING BY MEANS OF STRIPPING.

The enlargement of a photographic image by a simple expansion of the film is an interesting process. All methods for doing so hitherto published involve the use of an acid, generally hydrochloric; but the action of acids upon gelatin is a very injurious one, the gelatin softens and becomes easily breakable, the film loses its shape, and it is very difficult to obtain a really good result. An Italian amateur photographer, Professor Colombo, recently pointed out to

me a very simple means of enlarging by expansion of the film, which in my hands answered admirably at the first attempt, and which I think it would be useful to make known. The negative, which must not have been alumed previously, is immersed for ten minutes in a cold saturated solution of sodium carbonate. It is then taken out and allowed to dry without washing. It is then put back into the same solution, and after a few minutes the film can be raised, and, with care, removed entirely from the glass. This stripping is not generally at all difficult, although it is not so easy as when hydrofluoric acid or an acidified fluorid is employed. The film will be found hardly to expand at all in the carbonate solution, this action only taking place when it is transferred to the water. The expansion then is very considerable, and after ten minutes' soaking it diminishes slightly, and becomes uniform. A clean piece of glass is then put in the dish, and raised, bearing the film upon it, the fingers being used to expel any bubbles of air that may be between the film and the glass, and to press the film down into contact. It will be found to adhere perfectly without any gelatinous or gummy substratum, and the negative can be intensified with mercury—this is generally necessary in conse-



K. Stoel,

Grand Rapids, Mich.

SECOND PRIZE.

quence of the weakening of the image by the expansion — without any fear of it coming off the glass.

REVERSING WITHOUT ENLARGING.

This method of enlarging, I am able to say from my own experience, is perfectly practicable, and yields an increase of size from quarter-plate to, approximately, 4 by 5. The sodium carbonate method can also be used when it is desired to strip and reverse a negative without enlargement; all that is necessary in such a case being to immerse the stripped film in 95° alcohol, when it will shrink to its original size. But when stripping and reversing only are to be performed, the method first described with basic chrome alum and sodium fluorid is preferable.—*Photography*. PROF. RODOLFO NAMIAS.

PRINTING TINTED BORDERS ROUND P. O. P. OR BROMID PRINTS.

I tried some months ago a method described in one of the photographic magazines, of printing borders, and do not find it so easy and accurate as my own method, which I venture to describe, that you may test it if you think it likely to be of any use to others.

It is necessary to use a printing frame with open ends, i. e., flush with the rebate on which the glass rests.

The foundation of the method is the guide card for cutting the masks, and I make it as follows: Cut a piece of good stout white mounting card to fit the printing frame easily but closely, with a piece extending to the edge of the frame at one end to take the guide pins A.A. (see diagram); place the card in the frame, drive two stout pins through the projecting end well into the end bar of the frame, and cut off sufficient to leave about half an inch projecting. Before removing the card from the frame, make a line round it from the front, close to the frame, draw central lines horizontally and vertically from which to lay off lines marking the sizes of masks you intend to use, and at the corner of each puncture the card with a pin. We are now ready for cutting the masks. Take as many pieces of

stout paper as you will require for the style of border you wish to print, place them one upon another with the guide card on top and cut them accurately to size of card, taking care they do not shift from their position; pierce them through each corner hole in the guide card at the size selected and through the pinholes. The holes pierced in the pieces of paper will mark where lines are to be drawn for cutting the masks. You will now find that you have masks which can be removed and replaced exactly in their original position.

To enable the printing paper to be taken out and replaced in register, cut a strip of card of the width of the other end bar of the frame, place it in position, drive two pins through it into the frame and cut off to the same length as the guide pins A.A. Now place the printing paper on the clear glass in the frame, spread some Higgins' mountant on a strip of paper, press it down on the printing paper and strip of card to hold the two together. The mountant will dry in a minute or two without any damp striking through the paper.

Take the mask cut to the size the picture is to be printed, place it on the guide pins and with a little mountant attach the central portion to the clear glass to hold it in position for protecting the center of the paper while the border is being printed. When you have printed the borders, place another piece of clear glass in the frame, adjust the outer mask, then the negative, and finally the printing paper with guide card attached by means of the pins at the other end of the frame.

I can cut a guide card and masks in much less time than it takes to describe the method. M. G.

TWO POINTS must be remembered in making photographs of snow scenes. First, avoid trees and shrubs in the near foreground, as it is practically impossible to get detail in them and the snow at the same time; second, have the shadows toward you, that is, the lens should be pointing toward the sun. If the snow be unbroken, make a line of footsteps to get variety.

DEVELOPMENT.

Whatever make of plate people choose to employ, they should at the same time see to it that they use the developers of such strength as is suggested by the makers thereof. The practice is but too common of using any reducer that promises great things, regardless of whether or no it is suitable for the case in hand. The makers of the various brands of plate have each conducted exhaustive and expensive experiments to enable them to state with certainty the best formulas to use in exploiting their output.

This being the case, is it asking too much of those who honor them with buying their product to expect that such will employ the means they suggest in obtaining the results which will be most satisfactory for all parties concerned? Take, for example, those who use the Stanley plate. What sort of result will they get by using the developer intended for the Cramer or Hammer plate? Ten to one it will be a thin, unsatisfactory negative, and the brand of plate will suffer in reputation thereby. The fault was entirely with the worker in using a developer altogether unsuited to the occasion. Presuming that our old friend pyro is the reducer called for, Hammer suggests for his plates to each ounce of water 1.35 grains, while Stanley advises for his brand 2.97 grains. Here, then, is an immense difference, but not more than would result comparing the two makes of plate if developed each with the formula intended for the other. Then, Hammer calls for 4.8 grains sodium carbonate, while Stanley stipulates that 16.92 grains shall be necessary for his make. Here, then, is a tremendous increase, and doubtless all required, for Stanley has been making plates long enough to know what is what. In the "American Annual of Photography," for the year 1904, is a valuable table, compiled by Mr. Ulysses Orr, called "Comparative developing formulæ." For each ounce of water used is given the quantities of the various ingredients in the formulæ as prescribed by the makers of American plates for use with

their several brands. It may be of interest at this time to here exploit the differences that exist in the quantities of pyro called for to attain precisely the same results. Cramer calls for 2.8 grains, Seed 2.7 grains, Carbutt 2.1 grains, Hammer 1.35 grains, Wuestner 1.69 grains, Harvard 1.09 grains, Stanley 2.97 grains.

A friend of mine who has always used the Cramer plate, could never, much as he tried, do anything with the Stanley, and I could never fathom the reason, for I have no fault to find with the latter. But now to me it is as plain as day. He used a developer that was entirely too weak, both in reducer and accelerator. When I started in as an amateur photographer, I did not know one brand of plate from another, and relied entirely on the man who supplied my outfit to furnish what he thought best. He sold me some of Seed's and also the Stanley make, both of which I used successfully, though blindly. For a long time I was content to use Michell's one-solution developers, and somehow or other these seem to work wonders in the hands of the novice. Of late years I have used pyro almost entirely, Carbutt's formula, and fortunately for me, that works excellently well with the Stanley plate. Here is the formula, using the pyro dry after the developer is made up:

CARBUTT'S PYRO-SODA.

Sulphite of soda, dry..... 1 ounce
Carbonate of soda, dry..... 1 ounce
10 ounces of hot water.

Take of the foregoing 1 part to 10 of water, weak solution; 1 part to 8 of water, medium solution; 1 part to 5 of water, strong solution.

For general purposes the 1 to 8 solution, with from 1 to 3 grains of the dry pyro will form a useful strength of developer. Speaking from personal experience, I would remark that for the Stanley plate I have found the 1 to 8 solution with 2 grains of the dry pyro to each ounce of developer to be both certain and satisfactory in results with full exposures. This strength of developer I find just about right for flower and portrait work, giving soft-

ness and detail even in the highest lights. True, I never push development beyond the point of *just darkening the deepest shadows*. I take it that when the deepest shadows begin to darken, and are slightly darker than the edges that were concealed by the rebate of the holders, the negative is about done, and nothing is gained by pushing development further. There is rather a loss (in pictorial work) for the highest lights become all blocked up. Thousands of good exposures are yearly "done for" by people intrusting developing to those whose whole aim is to get the work done in the shortest possible time and in the cheapest manner. Many a good picture is spoiled by forced development with such reducers as M.Q. Some employ the same developer as is used for gaslight papers, and not enough diluted. Three photographs there are in my household, including myself. The other two, through indolence, have lately taken to getting their exposures developed by outsiders, with ruinous results in so far as values are concerned. Trees in the summer time are covered with snow, while the sun-kissed roadways are like chalk. It is too bad, for one of the party took some beautiful views in the Bermudas, having the plates developed there, and the white coral formation shows not a trace of detail—M. Q. again; more Q. than M, I fancy. Hydroquinone costs but little compared with some of the other developers and it certainly leaves its mark. With those who are in the business of developing for the amateur, the temptation is great to use a larger proportion of it than is good for pictorial results, hence so much "soot and whitewash." Half metol and half hydroquinone is about right, and where particularly soft results are sought, a larger proportion of metol is in order. Two-thirds metol and one-third hydroquinone leaves nothing to be desired for portrait work. It is a great mistake to employ a strong developer for pictorial work. The Eastman people are teaching a great lesson through the good results got with the developing machine,

using a very dilute pyro developer. Hence so many negatives saved that formerly, by the use of strong solutions, would have been ruined.

It is false economy to be stingy in the use of developer, or to begrudge the cost of the best. When a negative, that perhaps you can not replace, is at stake, what matters a few cents additional? Cheapness should never cut any figure with the serious worker, and I do not think it does. If the best reducer cost \$10 an ounce, it would still be cheaper than the poorest. That is the secret, I take it, with the friendliness for pyro among so numerous a body of talented workers. There are many cleaner and cheaper reducers, but to the users of pyro there are none better or more even and certain in results. Workers accustomed to pyro always find metol or metol-hydro a bit difficult to gauge at first. With pyro a thin negative is in order for pictorial purposes, while with the others mentioned much greater density will be necessary in order to attain identical results in the finished print. Here, I believe, is where so many fail, for the blue image is apt to be deceptive to the person accustomed to pyro.

Those who have experimented say that the results vary but little whatever be the developer employed. In other words, in the hands of the expert, good results are possible with all. It follows, therefore, that when we have found a developer that gives good results in our hands it is folly to change. One becomes accustomed to its peculiarities and has mastered the details of its working. A person of my acquaintance has pattered with every developer on the market, and in five years' experience has never been able to get any one of them down to a reliable basis. When he would start developing, the question would arise, "What developer shall I try this time?" so he was always in a quandary. Lately, I discovered he had discarded all but pyro, using Seed's three-solution formula, and I guess with that and Cramer plates he can not go far astray.

Reverting once again to the use of



DAISIES



James Thomson,

THIRD PRIZE.

Roxbury, Mass.

dry pyro, it is obvious it would be extremely inconvenient to weigh out the exact quantity required each time of developing. In this exigency a wooden mustard spoon looms up with all the importance of perfect adaptability for measuring purposes. As the cook book says anent making hare soup, "first catch your hare." So I say procure your spoon, fill up full and evened off with the dry pyro. Then weigh the contents, which, in the case of the one I have, is exactly 4 grains. This quantity, experience of many years has taught me, is about right for two ounces of diluted developer on flower, portrait and still-life subjects and pictorial effects in general. I always over rather than under expose, and develop for a negative of the thin variety, but with all possible detail in the high lights. Wherever there is texture I expect to have it in the negative. In developing white flowers or figures with white dresses, it is well to use a half-strength solution in which to start, finishing up with the other after detail is pretty well out. In subjects with a considerable white—flowers, snow scenes, dresses, etc.—I have found it to my advantage to never exceed two grains of pyro to the ounce of developer, and whenever I have been tempted to finish with a stronger solution, have been sorry. The highest lights would thereby be all blocked up, and yet there are those who advocate using as much as four grains to the ounce in finishing up, thinking thus to get a snappy negative. Snappy enough, I fancy, but exceedingly chalky as well. In flower and average portrait work softness is to be desired more than vigor and contrast.

In employing the formula as prescribed for the Stanley plate, a less quantity of carbonate of soda will answer when using the pyro dry. For with the dry pyro the necessity for sulphuric acid in the developer is obviated. It should be understood that a certain proportion of the large quantity of carbonate of soda called for in the formula that comes with the plates goes to neutralize the acid.

In regard to the development of gas-light papers, I think it is now recognized that the old-time system of employing strong developer was wrong. The sooty quality in the first Velox prints was a detriment, but the manufacturers were to blame, for they advocated strong reducer. Now all is changed and common sense rules here as in plate development, for it is clearly realized that with neither (except for special purposes) do we get the best results by forcing. For those who are using the old-time methods of the Velox worker—using developer four times as strong as that advised for plates—I commend the practice of reducing developer at least one-half, and giving a longer exposure. Moreover, many of the M. Q. developers that are sold so cheap have entirely too much of the latter for anything but soot and whitewash results. Some have as much as ninety per cent of hydroquinone which is altogether too much for soft, harmonious pictures with any regard for fine gradation. Even metol alone will produce excellent platinotype effects, as I discovered one day by the merest accident. All the professionals exploiting the gaslight papers are using dilute developer, and with most satisfactory results. Some of the product might well pass for the real platinotype, color and gradation leaving nothing to be desired, and, of course, the cost is much less.

JAMES THOMSON.

A SULPHUR TONING BATH.

Photographische Industrie, on page 1,109 of the number for November 30, 1904, gives the composition of a goldless toning bath patented in Germany by Herr Kurz, of Bale. In 100 parts of cold or slightly warm distilled water, 4 parts of lead nitrate must be dissolved, after which 4 parts of alum, 15 parts of hypo and 1-7th of a part of tannin are stirred in. The milky fluid is allowed to settle, and the clear fluid is poured off for use. The special claim as to novelty appears to rest in the use of tannin, this addition being said to improve the working of the bath and give stability.

AN INTERESTING DECISION.

There are a number of mercantile houses in the United States whose products, owing to high quality, are always sold at a standard price, and the mere fact that any such products, other than secondhand or shopworn, should be offered for sale below this price, ought at once to excite suspicion in the mind of the purchaser.

An interesting instance of this came to light recently in the suit of F. G. Anthony, of New Haven, Connecticut, vs. The Folmer & Schwing Manufacturing Company, of New York, in the Municipal Court of New York city.

The Folmer & Schwing Company are manufacturers of very high-grade photographic apparatus, and all their products have a fixed price to the consumer.

Some months ago Mr. Anthony negotiated for the purchase of one of their cameras through Henry C. Close, an employe of the defendant company.

The negotiations were carried out at the salesrooms of the company in New York, Close agreeing to make Mr. Anthony a special price for the outfit; the deal being concluded, Mr. Anthony returned home and, when notified that the outfit was ready for delivery, mailed his check for the amount, made out to H. C. Close, the employe of the company, instead of the company.

A little later Close fled to Mexico, where he is now imprisoned pending international extradition proceedings, it coming to light that he had been dishonest in a number of instances.

About this time Mr. Anthony sent his camera to the defendant company for some slight repairs. Upon examination of the serial number on the camera, it was found that the instrument had never been sold by the company, and they retained it as their property. The camera not being returned to Mr. Anthony, he brought suit to recover its value.

The testimony in the case proved that the defendant company had not sold the camera, and that the title did not pass from them.

The request of Close that the check be made payable to him should have

aroused the suspicion of Mr. Anthony, but, as it did not, he lost the case.

The decision in this case proves conclusively that one can not be too careful, when offered special concessions that are not warranted, or are unusual in a regular legitimate transaction.

SKATING.

No one with a camera can refrain from having a few shots at the gay throng of skaters, should there be any ice, so a word in season may be of use. Be sure that there are no quickly moving objects in the near foreground when you uncover the lens, for nothing is more disappointing, on developing your results, than to find that some unsuspecting skater has crossed the line of fire close to the camera at the critical moment, thus causing a big, big blur in the center of the plate, and your time and trouble has been all to no purpose.

COAL GAS FOR PHOTOGRAPHIC LIGHTING.

In the November 29 number of the *Journal of Gas Lighting, Water Supply, etc.*, M. T. Ebenezer Pye treats at some length of this subject, and he emphasizes the actinic value of incandescent gaslight. It must be about twenty years ago when Mr. Laws, of Newcastle, obtained portraits in his studio by gaslight, and amateurs even now scarcely realize how easy it is to photograph interiors at night with gas as an illuminant. As a rule, it is well to keep the light sources themselves out of the picture, although with suitable double or treble coated plates this is not important. Ordinary backing is scarcely sufficient.

TO MAKE a focusing screen, superior to the finest that can be bought—well, fix a dry plate, then flood it with a ten per cent solution of chlorid of barium, and follow this with a ten per cent solution of chlorid of magnesium. Allow to dry and a perfect focusing screen results.

PENNSYLVANIA CONVENTION.

The ninth annual convention of the Pennsylvania Association will be held in the Rifles Armory Hall, at Washington, D. C., from April 18 to 21, 1905. The secretary, Charles R. Gates, Lebanon, Pennsylvania, writes that the arrangements are the best that ever were—plenty of hall space, separate accommodation for lecture and show rooms, fine exhibits, fine spring weather with flowers blooming.

BUBBLES IN LENSES.

Sometimes, when buying a good lens, the amateur is frightened at seeing one or more bubbles in the glass, and thinks that the working of such a glass must be faulty, but if he try a simple experiment he will see that such is not the case.

Make an exposure in the ordinary way, and then, without moving the camera or any part of it, expose another plate in precisely the same manner, but this time having stuck a small piece of paper on the front of the lenses. On developing the plates the second will be found to be equally as good as the first, with, perhaps, the exception that the second has less exposure, according to the size of the paper spot. In the case of bubbles, these are so small that the amount of light stopped may be ignored.

R. H. A.

EDITORIAL TABLE.

Just before the holiday season started in, we received from the Eastman Kodak Company, Rochester, New York, the "Book of the \$1,000 Kodak Competition," in which are reproduced about sixty of the principal prize-winning pictures. They are very interesting and include an astonishing variety of subjects from all parts of the world—cattle, ships, railroads, fruit, flowers, animals, people, seascapes, portraits, hounds, cathedrals—but why go further; this is simply a list of the pictures as they come and to go over the lot would simply be to add to the list. The Kodak goes everywhere and takes everything.

From Taylor, Taylor & Hobson, Twenty-sixth street and Fifth avenue, New York, we

have received samples of a couple of useful articles—a circular level and a focusing magnifier. For many years a level has been an essential feature of every hand camera we possess, being attached to the bed just alongside of the finder, while for a dozen years an ordinary pocket level is always found in one of our vest pockets, to be used with ordinary stand cameras. The reason is this: that we never expose a plate, even on a figure or landscape subject, unless the plate be perpendicular, for long experience has taught us that such precaution prevents much poor composition. It is so easy to tilt a camera down, rather than to lower it, but best results are got by adjusting the camera to the proper level rather than by tilting. So the little level is welcome and will soon find position on one of our instruments. The price is 75 cents. The focusing magnifier is also a useful instrument. It is much more compact than the one we bought many years ago! in fact, is only one-half the size, and only half the weight. It has fifty per cent more field, better illumination, and a little more magnification, and is therefore a much superior instrument. The price is \$2.50.

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Negative by Mrs. W. W. Pierce,

Waukegan, Ill.

FIRST PRIZE.

THE PHOTO-BEACON.

EDITED BY F. DUNDAS TODD.

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No. 3.

SPECIAL NOTICE TO OUR READERS.

Luck has been rather unkind this month, so far as the engraving is concerned. A destructive fire burned out a large business building in Chicago early in February and we were the losers to the extent of half a dozen photographs that were in the hands of the engraver. Among them were included the first and second prize-winners of the portrait competition, and we are therefore unable to print them this month. We can only express our regret, for the matter was entirely beyond our control.

We have frequently referred to the difficulty of making reproductions from the prints submitted in these competitions, and again assuring our readers that the finest quality of the prints could not be reproduced, because of the color. As a rule, it is the sepia tones that worry the engraver most, but this month he met his Waterloo when he faced the second-prize picture. The print is a very beautiful bit of work in a bluish-green carbon, but after wrestling with it for some time, we received the following note from the engraver: "We are sorry to inform you that it is impossible for us to make a satisfactory half-tone from this photograph. We enclose a print on copper and you will notice that it is also very unsatisfactory. We have tried repeatedly to get a good negative, but find it is utterly impossible to do so."

We felt our readers were entitled to

see the second-prize print and so the reproduction, poor as it is, appears in this issue, but one and all must understand what the conditions were.

Every month we are beset by the same problem, whether to award the prizes to the prints that will make the most satisfactory reproductions or to the ones that honestly deserve them. Up to the present time we have adhered strictly to the latter policy and have no idea of departing from this rule, but we must ask our readers never to forget that we editors have troubles of our own.

A PROBLEM IN DEVELOPMENT.

It seems almost impossible to exhaust any subject, even in one's own mind, for just as soon as a man thinks he has reached finality some new point crops up. For instance, before my last article on development had appeared in last year's volume, I found myself pondering a couple of new problems which seemed to follow naturally from the facts that I had learned.

One of these is peculiarly interesting at the present time on account of the great popularity of developing papers, and it is really almost a vital problem to many professional photographers who have begun to use such papers in their business or contemplate doing so.

In these articles I pointed out that in an average landscape the range of gradation was about 1 to 32, but that the average dry plate could record a range

of sixteen times that, hence the great latitude in exposure. But our printing processes have a much shorter scale. Carbon will run from 1 to 256, ordinary glossy printing paper from 1 to 64, while bromid paper, it is said, has only a range from 1 to 16. One can see that it is fairly easy to make a negative that will make a good print with carbon or P. O. P., but what about bromid paper with its short range? So there arises in my mind this interesting problem: Given a certain subject, say an ordinary landscape in full sunshine, with deep shadows, that is, with a range of about 1 to 32, is it possible to make a negative that will make a first-class print on a gaslight paper, or with such a subject must one select a printing process that will suit it?

When this problem first struck me I put it to a number of practical men, and, offhand, they assured me it was no trick at all. But I also set it to a friend who is a keen student of scientific photography, and his offhand reply was that, after a few weeks' close investigation, he might be able to tell me definitely, but viewing the problem through my eyes he thought there was emphatic ground for doubt.

A few days later I had a visit from a practical man, a successful business photographer. A man of this kind I usually pump dry before I permit him to depart, to learn some of the secrets of his success. On applying the sweat box to my friend, my first discovery was that he had more than trebled his net profits last year by substituting gaslight papers for printing-out. He had been able to dispense with two-thirds of his printing staff, curtail his printing space, these economies resulting in a net saving of over \$200 a month to the great profit of his pocket.

Now, here was just the man I was looking for, one who was using a short-scale printing process, and I wanted to know about the character of his negatives. The scale of tones in a portrait is ordinarily about 1 to 17, so that my readers can see any instance of contrasty lighting is bound to be beyond the scope of the paper used.

Catechizing a practical man for scientific reasons is worse than cross-examining a witness, because the terms in vogue among photographers are very vague in their meaning, but by dint of close questioning I succeeded in getting from my friend the following facts:

First, he used in his studios four brands of paper, namely, smooth, medium and rough gaslight and platinotype. Second, none of his operators could always make a negative suitable for the gaslight papers, and all failures were printed in platinotype. Third, just after he had made the change, more than half the negatives had to be printed in platinotype, but of late only ten per cent required this process, and he was in hopes that soon he would be able to get rid of this last remnant.

My readers will see that he uses platinotype as a makeshift, in other words, when the range in the subject is beyond the capacity of the gaslight paper, he substitutes the expensive material at no extra charge to the customer.

Following up the matter, I found that the improvement in the negatives was due to a complete change in the methods of lighting, not to any modification in the development process. In other words, his operators reduced the scale of the subjects by eliminating decided shadows, and very recently practical experience had compelled them to retire to the lumber room all dark backgrounds.

Of late, I have received from professional readers a considerable number of portraits printed on such papers, but very few of them are really good, simply because the lighting of the subjects was far too contrasty. Some have black backgrounds and are very unsatisfactory.

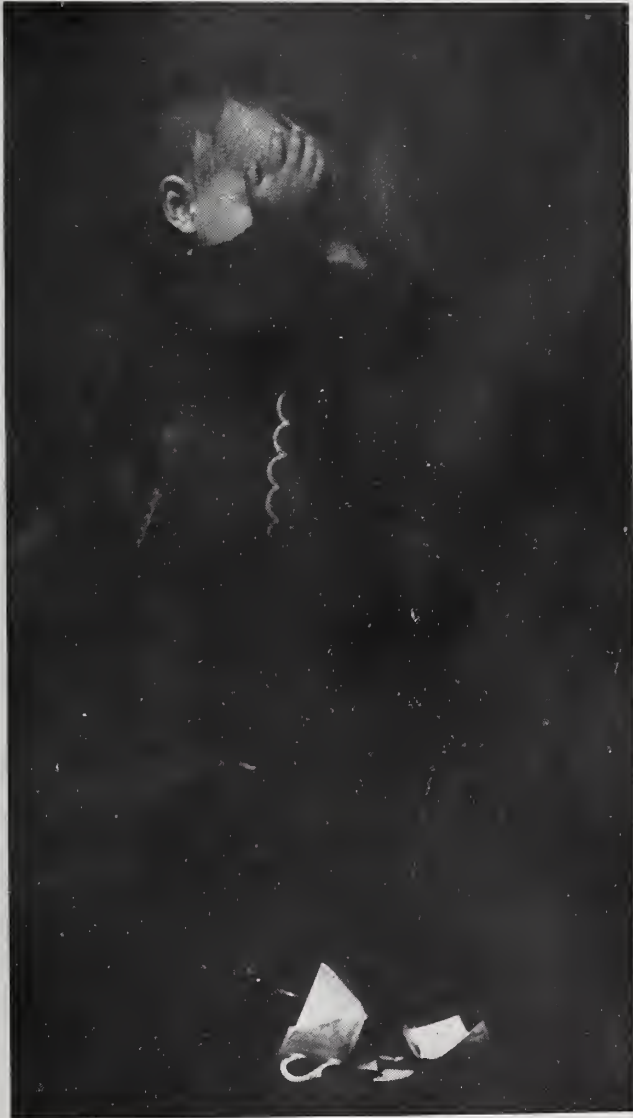
Once my winter rush is over I will tackle the problem I have raised more seriously, but in the meantime I would like my readers to meditate over it, and above all to remember the experience of my photographer friend, especially if like him they contemplate using a gaslight paper as a steady thing. Its use in a large gallery is certainly a money-saver.

F. DUNDAS TODD.

PICTORIAL COMPETITION No. 82.

It is frequently said that the average man undertakes photography in order to keep a record of his belongings, the

of the most popular of the year, and brings forth work that is of the very highest pictorial merit. This year's competition is no exception to the rule;



Negative by Albert H. Moberg,

Chicago.

SECOND PRIZE.

(See note on page 67.)

most important of which are his wife and children. Probably the theory is all right, because the "pictures of children under seven" competition is one

in fact, on looking back on many of the prints submitted a year ago, I am surprised at the big advance that is shown to have taken place during the year.

The judges made the following awards:

First Prize.—Mrs. W. W. Pierce, Waukegan, Illinois.

Second Prize.—Albert H. Moberg, 945 Seminary avenue, Chicago.

Third Prize.—A. B. Hargett, 1904 North Fulton avenue, Baltimore, Maryland.

SPECIAL MENTION.

J. H. Field, F. E. Bronson, George T. Power, N. G. Helwig, R. E. Weeks.

PARTICULARS OF WINNING PICTURES.

First Prize.—Taken on a Cramer Crown plate, exposure 1-5 of a second, printed in sepia platinum.

Second Prize.—No particulars given.

Third Prize.—Made in open air, August 25, with No. 4 stop, exposure 1-5 second on Seed 26 X plate, printed on velvet Velox paper.

CRITICISM OF WINNING PICTURES.

The maker of the first picture writes to say that this competition is always interesting to her on account of her "Small Fry," and that she simply can not resist the temptation to come in when this contest comes around. I have watched her babies growing in years, and very likely discretion, with considerable interest, and I sincerely hope that the writer will never want good subjects for this competition, even though it happens to be restricted to young folks under seven years of age. The prize-winner has the kindness to say that she is afraid she will never again win a prize in this competition, because in her experience these contests are the stiffest in the country; but the fact that she comes out first in the particularly stiff competition this year ought to give her great encouragement.

The great thing, after all has been said and done, in the child portrait is naturalness. I wish that many parents would remember this, because nearly every print that comes into this office portrays the great desire on the part of the photographer to make the child look "cute." Such pictures are mercilessly turned down on the very first round. Those where naturalness predominate are reserved for future consideration.

Every parent knows that the boy portrayed in the first-prize picture is nothing more nor less than a boy. He is not a bit "cute" or funny, but a real, solid, chunky, healthy, every-day boy that eats three good square meals a day, with such apples, etc., as he can forage, sandwiched in between. He knows his little world perfectly and he is perfectly satisfied that he knows every thing just like every other healthy, normal boy. And this is the reason that this plain, every-day boy is awarded by the judges the first prize.

I have to confess that I am rather pleased with the judges' decision in awarding the prize to the print that is marked second, because the maker of it has been a keen student of pictorial photography for quite awhile, has won many prizes in other contests, but somehow never seemed to be able to get beyond the honorable-mention class in our competitions. He has persistently taken part many times in the year, and I can not but congratulate him in having at last gained his ambition and that, too, with a very sweet study, one that is so simple, so natural and yet true to life. One almost feels as if the parent just happened around when the accident occurred. This picture reminds me of a family jar that occurred between myself and my better half about fourteen years ago. A happy inspiration of a clever title struck me one day, namely, "Hit the Wrong Nail," and in my mind's eye I had a vision of my eldest one crying, because, in trying to hit an ordinary nail with a hammer, he had hit his thumb. So I planned out the whole thing, got a box, some odd pieces of wood, some nails, a hammer, set up my camera and then started out and got hold of the boy, age four, to wrestle with the tools. My intention was to watch for a good opportunity and press the button at the proper moment. Just after I had got the whole train successfully laid and everything looked lovely, the mother of the child came in sight. She at once realized my foul plot, so swooped down and carried off the young one, while at the same time she frankly told me what she thought of

my hardheartedness. I tried to reason with her that sooner or later he was bound to learn the lesson of hitting that thumb nail, and I might as well have the side benefit as not, but she could never see it that way.

The third-prize picture is really very

the chair next to me. In this picture, however, there is some reason for the dolly being where it is. In the first place, from the young lady's point of view, it is superintending the washing, and, pictorially, it makes a connecting link between the washtub, clothes and



Negative by Mrs. W. W. Pierce,

Waukegan, Ill.

good composition and at the same time as natural as it can be. The young lady who sits on my left at the supper table every night invariably places two dolls on the chair next to mine, and I have never yet been able, by logical argument, to get her to understand that there was no reason for these dolls being on

line. Just notice how nicely the curved line runs from the head down the child's figure, past the washtub on to the dolly, then it bends in the opposite direction and includes the clothes. Altogether, this is a very natural, pleasing picture to me.

F. DUNDAS TODD.

FUTURE COMPETITIONS.

Competition No. 84—Snow pictures.
Closes March 31.

Competition No. 85—Waterscapes.
Closes April 30.

Competition No. 86—Branch of a tree without leaves, with special consideration of decorative effect. Closes May 31.

Competition No. 87—Domestic animals. Closes June 30.

Competition No. 88—Genre pictures, or pictures that tell a story. Closes July 31.

Competition No. 89—Branch of a tree with leaves, with special consideration of decorative effect. Closes August 31.

Competition No. 90—"At Home" portraiture, that is, portraits not made in a studio. Closes September 30.

Competition No. 91—Snap-shot pictures. Closes October 31.

Competition No. 92—Landscapes. Closes November 30.

Competition No. 93—Flower pictures. Closes December 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the sender's name and address, *but nothing else*. The outside of the package in addition to our address, may bear that of sender. Accompanying, a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given; also the printing process.

2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

3. Prints are not returnable.

PRIZES.

First—Books to the value of \$5.

Second—Books to the value of \$2.50.

Third—Books to the value of \$1.

Any books, on any subject, or, if preferred, any article we can buy in Chicago.

PROFESSIONAL PORTRAIT COMPETITION No. 13.

For two hours I sat with nine prints in front of me, trying to decide in my own mind which of these nine prints deserved to be first, second or third in this competition. Then I blamed an article that I had read the night before in the *Strand Magazine*, which had impressed me very much. Very few married men are ever told by their male acquaintances that they deserved to get the girl who married them. As a matter of fact, they are usually asked how on earth they ever succeeded in getting as good a wife as they had secured. For many years I have recognized the attraction of opposites. Nature continually makes variations from her supposed standard of type, and then she combines these variations to bring about a new standard, and that is why human beings love the very opposite of themselves. This tendency certainly gives us lots of trouble and at the same time amusement, because if it were not so there would be no excitement over love, politics and religion, not to speak of art, in which we are more immediately interested at the present, and if there were no differences of opinions in these subjects this would certainly be a monotonous world.

When I sat down to select the prize-winners from the prints submitted, I found myself handicapped, because in spite of all I could do I found it utterly impossible to forget the subjects and think only of the pictorial qualities. I was not at all satisfied with the decision I arrived at and so I took the nine prints around to some art friends of mine and asked them to make a selection, this being the first occasion on which I shirked the duty of deciding in this competition. I was very glad when my friends selected the same three prints that I had chosen and arranged them in exactly the same order, so that, after all, I had not been so much influenced by the subjects as I thought I had been. Either that or my friends must have belonged to the same type of humanity as I do.

As mentioned elsewhere, it is impossible to show this month the first and second prize pictures, but I print the criticisms just the same for the benefit of the prize-winners.

The first-prize picture in its scheme of lighting follows very closely the ideas

the lens appears to retire — go back — as my old friend used to describe it. I see so many portraits in which the farther away cheek seems to come forward, more especially when the so-called Rembrandt lighting is adopted. In this particular scheme of lighting,



THIRD PRIZE.

advocated so many years ago by Mr. Inglis, and the maker has got every bit of the theory down to a nicety. It will be noticed how the head emphatically suggests a solid, and I would draw particular attention to the side of the cheek in shadow, where one finds that the portion of the face which is farthest from

the ear is always a problem, because, on account of the light falling directly upon it, it is apt to appear very much lighter in tone than it is, and so it is often wisdom to interpose between the source of light and the ear a screen of some sort. It is evident that this has been done in the case under our consid-

eration. Little need be said about the spacing, which certainly contains essential variety, nor about the background, which is in proper harmony with the high lights and the heavy dark of the clothing. The maker of this print is Mr. J. H. Field.

The second-prize picture is practically lit like the winner of the first prize, and what I have said about the one applies to the other. The only point worthy of notice between the two is this. A more alert expression is obtained by getting the subject to look straight into the lens, than when some other direction is chosen. I do not mean by this that every sitter should look into the lens, because the alert expression might not be in harmony with the temperament of the man. For instance, in the second-prize picture, I think the photographer has been wise in directing the eyes a little upward and outward, because the type of man he portrays is one who is accustomed to contemplate things in the mass and to predict the future results of present actions.

The third-prize picture is by our western friend who has frequently obtained third place. When it arrived in the office I thought that for sure he at last was going to get first, but it was not to be. One does not usually consider that this type of face is characteristic of the West, but rather expects to find it more in the esthetic regions of older communities. The photographer has got on to the temperament and has endeavored to pose in harmony with it. Curves may be considered as the embodiment of the type, and so the photographer has worked out his composition with that idea, with the result that there is not one straight line or sharp turn anywhere. For my part, I think I would have liked to have seen one straight line somewhere, just as a relief from the sinuosity of the scheme.

BRIEF MENTION.

Where so much was good it is hard to find fault, and so my readers must be contented with a few short phrases.

S. L. L.—I thought "footlight"

lighting was dead. Since our source of light is above, any other scheme in art is freakish and will pall on one sooner or later.

Berkemann.—Very good.

H. O. M.—You have striven for too many subtleties in middle tone, the result being that interest is too much scattered.

W. F. E.—Very effective, but you have gone to extremes. Too much high light on the face and deep shadows. Be moderate.

Muntz.—I like the pose and general effect very much.

C. V. de B.—Too posy. The trunk of the child and the head are trying to look in different directions. Above all things in a child's picture get naturalness.

Davis.—Specially notice that the far-away cheek is coming toward one. It ought to be going back.

Borrry.—Far-away cheek comes forward.

H. J. L.—The idea is good, but the accessories are too much in evidence for artistic work.

F. DUNDAS TODD.

RULES.

1. Only one print to be submitted in any one month, and this must be from a negative made in the ordinary course of business within sixty days of the date it was mailed.

2. The pictures will be judged on the first day of each month, and all prints received prior to that date will be included.

3. Requests for private criticism, accompanied by fee of \$1, may be sent along with the print and will be answered after the judging is over.

4. Mark outside of package with the words "Portrait Competition."

5. Prints are not returnable.

THE first historical competition closes on March 31, and we hope to see a large number of prints submitted. Readers should remember that the principal test is human interest, the second is technical excellence; pictorial quality is not considered.

REMINISCENCES AND RAMBLING RECOLLECTIONS OF EARLY PHOTOGRAPHIC TIMES.

EMBRACING A PERIOD FROM 1839-40.

Sitting beside a cheery fire, slightly dozing in my arm-chair, drowsily watching the snow flakes drifting past the window pane, I wake up and have presented to me a letter from my photographic friend in Chicago, Mr. F. Dundas Todd, couched in his usual frank and genial manner, reminding me of a conversation we had some time ago about photographic matters in general. He then proposed that I write a series of articles relating to my experiences in the early days of photography and how I came to be interested in the art, also some of the incidents connected with its early dawn, and some of the kindred spirits who did much to advance its progress and awakened in me a zeal and enthusiasm which has kept alive through many changes and flight of years. Indeed, it is somewhat amusing how persistently some of the incidents keep bobbing up in my mind, recalling conditions that then existed, and, as they may prove interesting to the present generation, I will relate some of them, beginning about the time when

"A youth from school, I then began
To fan the wish: Oh! were I man,"

and a number of hobbies had begun to occupy the most of my leisure time.

It would be hard for me to tell just when photography became one of my fixed hobbies, as somehow it "just grewed" along with the others and has kept a firm hold of my interest to the present day. In the first place, when a boy, I was early imbued with the desire to learn a trade, and my inclinations — could they be correctly interpreted — were masonic, hence I became an apprentice mason, to learn building and hewing (stone cutting), to know and appreciate the true meaning of the plumb, the level and the deft handling of the square.

It was the duty or privilege of the youngest apprentice to carry or wheel the mason's tools to the smithy to be sharpened. This was assigned to me,

and many long, tedious journeys were consequently made to the smith's shop, where I waited till the blacksmith got them all dressed — sometimes quite a while. I employed the time observing what was going on in the shop, and sometimes the smith would ask me to give him a help with the forehammer or bellows. I noticed how the tools were dressed and tempered, the most important part of all, and became familiar with the work. I interested myself with woodcutting. Making small models of full-rigged ships, mechanical engineering, models of steam engines (real working), making patterns which were sent to the foundry to be cast in iron or brass, which I finished — having a nice turning lathe, tools for drilling, screwing, filing and turning, teaching myself to be a good turner, etc., and could finish small articles with the precision of watchmaker work. Having in my possession some very nice small pictures, which I was fond of, I took an original — if not a queer — fancy to make for them frames, cut out of solid stone, which taxed my ingenuity not a little. After many unsuccessful attempts, I at last succeeded in finishing some that had all the appearance of a wood-molding frame, and these were considered quite a curiosity.

Some time before the announcement of the remarkable inventions of human ingenuity acting under two of nature's mysterious agents, light and electricity, railways were being constructed in Scotland, as people were forming new ideas and becoming anxious for more rapid transit. Transportation was then conducted by canal boats, stage and mail coaches and carriers' carts.

Passengers were carried by canal in what were called swift boats. These were very finely fitted up with inside decorations and comfortably cushioned seats, with windows ranged on both sides, through which passengers could view the scenery as they passed along, and many very beautiful peeps were got from certain points on the journey. They were called swift, because by arrangement horses were changed at short distances along the route, enabling

them to run at a high speed all the time. These were ridden by postilions rigged out in splendid uniform, with gilt buttons, breeches and top boots, who prided themselves in flourishing their whips, keeping up quite a dash, in their part of the performance, which kept the passengers cheery and amused most of the time. The freight and baggage were conveyed during the night in larger boats, where a cabin very comfortably fitted up was provided for passengers who preferred traveling at night. The cabin was provided with liquid and other refreshments. The boat was nicknamed the "Nicht Howlet" (Night Owl). Many happy nights and never-to-be-forgotten incidents were enjoyed in the "Nicht Howlet," and it was during a night trip in a "Howlet" that I first saw a photographic camera (at least from subsequent knowledge I knew it was such). It was in charge of a man who seemed very quiet and careful over his charge. He evidently was merely a messenger conveying the two boxes, one the "Obscura," as he called it — the other containing chemicals in bottles. He was warned, he said, not to let any one touch them. They were something mysterious, for taking pictures by the sun, on paper, that was all he knew about it, and he was to deliver them to a party near Stirling. He left the boat at Falkirk.

An acquaintance whom I often called upon, named Charles Ormond, was employed by a railway company. He had charge of a railway store and was learning to understand and work the new electric telegraph, Cook and Wheat-ston's, which then required five wires. He showed me the batteries and connections, with the arrangements, explained some of the peculiar movements, electro magnets, permanent magnets, etc. I became quite interested in electric matters and studied a little in that way. At his place one day he remarked that he had just been hearing of some wonderful contrivances that had been given out to some of the scientific societies lately, by the inventors, that could hardly be credited, but the inventions of man with railways and telegraphs are

getting nowadays very common. "It is no less than making the sun take pictures. That is one of them," lifting a handful of copper sulphate crystals from a keg in his place, he held them up and remarked: "It is to put these in water and melt them — this sulphate of copper — to make a strong solution, connect with a battery and send a current of electricity through the solution; it is said to cause the metal copper to be deposited on the surface of any other metal. I can not just see how such things can be done, but it has set me a thinking, so I will try and get some more particulars and tell you about it for you young folks have a lot before you to learn."

This information interested me greatly and I longed to hear some further news. It was not long before I called again on my friend to hear what further information he had got. He had been making inquiry and told me he had succeeded in getting the loan for one day only of printed copies of reports, made to the society by the inventors, but he could not let me take them away for use, as they had to be returned in the morning. He was pleased to see me and asked me to take a look at them and see for myself what was said. I read Talbot's announcement about taking pictures by the light of the sun, or photogenic drawings; making negatives and printing copies of the same on paper; also the discovery of Sir John Herschel of the action of liquid hyposulphite of soda, for fixing photographs; also some details of the electrotype process. This latter caught hold of my fancy to such an extent that I could not rest till the process was tried. It seemed so simple and not very expensive.

In a few days I had rigged an electrotype arrangement in working order, by using a jelly pot for the cell for the copper solution, inside of which I used a small flower pot, with cork in the bottom hole, which formed the porous cell to hold the dilute sulphuric acid solution and the thin zinc clipping for the battery pole, to connect with the article to be plated or electrotyped. I soon got into the way of doing electrotype work with

small medals, but mostly penny pieces at first. The electrotype experiments were continued for some time, but were occasionally interrupted while I tried to get photographic appliances put in shape. I had not yet got particulars of the silver plate process, which I had heard of and anxiously desired to know more about.

PETER DOW.

(To be continued.)

TONING BROMID AND OTHER DEVELOPED SILVER PRINTS.

CHAPTER III.

GOLD AND PLATINUM TONING.

Toning the black or gray silver image on bromid or gaslight papers with gold is very seldom resorted to, as it is generally considered that as a rule nothing can be gained thereby. Gold is deposited on a bromid print in the blue-colored state, and so the effect of gold toning is to render the tones much bluer than before.

Now, when the original tone is a good pure black or gray, most people will consider that, so far from any improvement being brought about by making it more blue in character, exactly the opposite is the case. However, the method can be advantageously employed when the print is in any way rusty or greenish in color. Here it is best to employ in the first instance the redevelopment method advocated in the second chapter, and only to resort to gold toning if it should prove necessary after this has been done. In actual practice, redevelopment by itself will very seldom fail to yield a most satisfactory tone.

I do not mean to imply that gold toning is not a good method to employ. It is certainly a good method, only there is a danger of getting too blue a tone.

We noted in the preceding chapter that a print on P. O. P., simply fixed, could, after washing, be bleached and redeveloped so as to give a black image. The color of the silver is in this case not as a rule satisfactory, but it can be put right by toning slightly with gold. A stronger solution of gold must be used with bromid prints than when ordinary P. O. P. prints are toned in the



Neg. by Geo. T. Power,

Chicago.

same manner. The coarser grain of the bromid print causes the inter-action between the gold compound and silver to be much slower than in the case of P. O. P.

The ammonium sulphocyanid bath is usually recommended. To employ such a bath it is convenient to make up the following stock solutions:

I. GOLD STOCK SOLUTION.—One fifteen-grain tube of gold chlorid in five ounces of water.

II. AMMONIUM SULPHOCYANID STOCK SOLUTION.—150 grains in five ounces of water.

One part of I is added to one part of II, and the mixed solution allowed to stand till it is colorless. This solution is best diluted to half or even quarter strength, except when we wish to get a very blue tone.

After gold toning has proceeded to the desired degree, the print should be washed in water and then fixed, and after this well washed again.

By resorting to gold toning in the case of gaslight papers on which a red silver image has been developed, a series of colors passing from red through

purple to blue can be easily obtained. The bath generally recommended for this purpose is the well-known *sel d'or* solution, the formula for which is given below. A small quantity of sodium carbonate should be added, because otherwise a deposit of sulphur will at first occur. The precipitation of sulphur appears to be complete in about three hours; and it may be that, if the bath is allowed to stand for at least that time, no danger will arise. Still, there is a pretty generally felt suspicion that in such a case all the depositable sulphur does not come down in the first instance, but that it will be brought down by the attraction of the silver image, or perhaps of the gelatin, which has unfortunately the power of absorbing sulphur to some extent. The matter is not clear by any means, and so some soda should certainly be added. In this case the bath becomes quite free from objection.

GOLD STOCK SOLUTION.—One fifteen-grain tube of gold chlorid in $11\frac{1}{2}$ ounces of water.

SEL D'OR BATH.

Sodium carbonate	45 grains
Hypo	$2\frac{1}{2}$ ounces
Gold chlorid solution.....	3 ounces
Water	to 10 ounces

This bath keeps well, and is replenished with fresh gold chlorid as required. In toning the red silver prints, care is needed to prevent overtoning, as the color of the wet print is very deceptive.

An interesting method of toning bromid prints with gold was recently published by M. Le Mée in the *Photo-Revue*. The prints are first bleached in a bichromate-chlorid bleacher—the one given in my last chapter will serve very well—and are then exposed to light in a solution of sulphurous acid. A suitable solution is:

Sodium sulphite ($\text{Na}_2\text{SO}_3 \cdot \text{H}_2\text{O}$)....	40 grains.
Sulphuric acid (concentrated).....	12 minims.
Water to	10 ounces.

The sodium sulphite is dissolved in the water before adding the acid. Substances other than sulphurous acid can be used, such as citric acid, an alkaline citrate, or potassium nitrate; but sul-

phurous acid is much the best. On exposure to light in the above solution, the image reappears fairly rapidly. When it is sufficiently reprinted out, the paper must be washed for a few minutes, and can be then toned with gold.

It is claimed that the image thus obtained is much more favorable to gold toning than the original one. I can not say that I have found much advantage in this proceeding as applied to gold toning, but it is certainly an interesting method which some may find advantageous. The action of the sulphurous acid is no doubt that of a chemical sensitizer—it absorbs chlorin, and so helps the action of light. If the image is too weak after fixing (which with these gold toning processes must never be omitted, except, of course, when a combined bath is employed), this shows that the exposure to light has not been long enough.

On exposing to light till apparently no further action occurs, and then after washing, either fixing or treating with a developer to get rid of any chlorid or sub-chlorid remaining, a dark purple silver image is obtained in the case of bromid or gaslight papers, and a yellow one in the case of P. O. P. The purple images of the wet bromid and gaslight papers become almost black when the prints are dry.

Toning bromid or gaslight prints with platinum is not as a rule an advantageous proceeding; but, as in the case of gold, it may be used to cure rustiness and similar ills. A suitable solution may be made by dissolving about two grains of potassium chloroplatinite in one ounce of water and adding two or three drops of concentrated nitric acid. After toning, the print is washed in water, and then fixed. The color of the deposited platinum is black.

Several attempts have been made to improve the platinum toning solution by adding to it certain other substances. Cupric chlorid, ferric oxalate, potassium ferric oxalate, and mercuric chlorid were proposed by the late Mr. W. B. Bolton (*British Journal of Photography*, November 9, 1894). Mr. Bolton came to the conclusion that mer-

curic chlorid was much the most suitable substance for this purpose.

In the case of the addition of mercuric chlorid, the mechanism of the reaction is as follows: Mercuric chlorid bleaches the silver image forming silver chlorid and mercurous chlorid, and then the mercurous chlorid so formed reacts with the platinous chlorid, forming mercuric chlorid again, and platinum is deposited. The image consists of silver chlorid and platinum, together with an amount of mercurous chlorid depending on the difference of the velocity of the action of platinous chlorid on mercurous chlorid, and the bleaching action of the mercuric chlorid on the silver. There is also, of course, present in the image an amount of unaltered silver, depending on the stage to which bleaching has been carried.

A sepia tone is given to a bromid print by such a method; but it seems more due to the chlorids present than to the platinum, for it is destroyed in fixing, and the print much weakened.

As to the permanence of prints toned by this method, little reliance can be placed thereon. It is certainly desirable in this case that the word platinum should not deceive. It must be said, however, that, although there are no doubt very suspicious points about such

an image, yet in actual practice many prints toned in this way have been found to last much better than one would have thought. It appears that the silver chlorid is only very slightly affected, if at all, by light. This is curious, and is due to its molecular state being influenced by the mercurous chlorid. The actual composition of the image is certainly a somewhat variable one, and so the degree of permanence possessed by different prints will vary. The method yields prints undoubtedly more open to attack by sulphuretted hydrogen than is an untuned bromid print, and as there are far better and more certain methods of obtaining a sepia tone, this one would certainly appear inadvisable.

Mr. C. W. Somerville states that the composition of the bath should be exact in its details in order that a good tone may be obtained. His formula is:

Potassium chloroplatinite .	2 grains
Mercuric chlorid	1 grain
Citric acid	9 grains
Ten per cent solution of potassium bromid	2 minims
Water	to 10 ounces

After the desired tone is gained, the print is washed in water, and is then complete. Fixation, for the reason above given, must not be resorted to.



Negative by Curtis Bell,

New York.

Mr. Somerville has advocated applying a developer to the toned print as a method of intensification. The developer reduces the silver chlorid and mercurous chlorid to silver and mercury. The metol redeveloper given in the previous chapter is suitable.—*Photography*.

THE SEVEN PHOTOGRAPHIC AGES.

The *Sun* has given the seven photographic ages of man. First, he is photographed as prattling, bald-headed baby, absolutely destitute of eyes, but making up for this deficiency by a wealth of mouth that would make a negro minstrel olive green with envy. Then the boy, with fresh-cropped hair, and in which the stiff and protuberant thumb takes a leading part. Third, the portrait of the lad, with strangely marked freckles and a look of hopeless melancholy on his shining morning face. Next comes the young man, twenty-one years of age, with his front hair plastered smoothly down over his tender, throbbing dome of thought. He does not care so much about the expression on the mobile features, so long as his left hand, with the new ring on it, shows distinctly, and the string of jingling, jangling charms on his watch chain, including the cute little basket cut out of a peach stone, stands out well in the foreground. Fifth, the tintype, taken at the seaside, wherein a young lady sits on the alleged grass, while he stands behind her, with his hand lightly touching her shoulder. He carries this picture in his pocket for months, and looks at it whenever he may be unobserved. The scene shifts; one day he comes into the studio with his wife, and tries to see how many children can be photographed on one negative, by holding one on each knee and using the older ones as a background. The last stage in his eventful career: the old gentleman allows himself to be photographed because he is afraid he may not live through another long, hard winter, and the boys would like a picture of him while he is able to climb the dark, narrow stairs which lead to the artist's room. And then sans photograph, sans everything.

A LITTLE NONSENSE.

The Columbia Photographic Society, Philadelphia, is composed of as jolly a lot of good fellows as we ever got among, all ballasted with just enough business sense to run a splendid clubhouse of fourteen rooms at a reasonable cost to the members. The following extracts from the club magazine will give some idea of the fun the members have when they get together. The serious side of their club career is better known to outsiders.

A GROWL FROM THE OLD-TIMER.

"Don't disturb me," said the Old Professional Photographer. "I'm writing an article for the Sunday papers on 'How to Live Well on Three Meals a Day, with Snacks Between.'"

"A new lens to show me; what, another! The new Jenny glass, I suppose, and mounted in a tonyum F O I — Series VI, corrected for *spectral apparition* — (got rid of the old-time 'ghost,' at last). A rastygmet lens of the highest type—giving great depth of focus at its largest aperture.

"I knew it would only be a matter of time for those Dutchmen to give a knockout blow to the Law of Optics. But what's the use buying a hundred dollar lens to make Saloon pictures?"

"Young Fakem told me how to do it last week.

"He said: 'Compose carefully, focus finely. Put in plateholder rack, lens backward or forward — or both. Kick the leg of the tripod and expose once or twice according to the light and subject. Develop for broad, smudgy effects. Stain print in coffee solution or tobacco juice for 'A Brown October,' or smear with a cut finger for 'Aroarer.' Mount on tickle-edged paper, with the print way up in one corner and your signature running up and down or across lots, and it'll be Saloon, all right.'"

"Old man Dodger has gone young Fakem one better.

"He says: 'What's the use bothering with a camera making a negative, when you can get your print direct from a piece of dirty glass and the skilful use of a stub?' Though I must say his

last success, 'Cattle in the Gloaming,' is a beastly smudge.

"Talking about lenses — I see they've invented a new '*Hypo Gun*' which shoots to the top of a twenty-story building — over the roof and half way down the other side. Designed, of course, by an amateur, whose motto seems to be, 'What's impossible can be done.'

"Have I tried tank development? Yes, some time ago, but I'm on the water wagon now.

"Brush development?

"Yes, every morning, for five minutes at a time; but I lost hair, just the same and gave it up.

"I see George Rochester has got out another novelty — a double-faced film. After exposing one side you can turn it around and make another lot of pictures on the other, saving the annoyance of making double exposures on a single film, and getting the same result.

"Well, I expect soon to see a filmless kodak, with a pressless button, which will prove a priceless boon to the tired, trouble-saving amateur photographer."

W. N. JENNINGS.

THE RIME OF THE ANCIENT AMATEUR.

I met a man of fearful mien,
And Summers and Winters many,
I asked, "What specter have you seen?"
Said he, "I ain't seen any.
Don't stop me now! I haven't time,
I'm struggling with a load, ah!
Trying hard to find a rime
For Hypo-sulphite-soda."

"In vain the midnight oil I burn,
My Muse seems pretty far gone,
My pants I've rent, my hair I've torn,
O'er Homocentric and Hypergon.
Winged Pegasus, the inspiring steed,
I'm afraid I'll ne'er get on again;
He's foundered quite, and off his feed,
With Formaldehyde and Eikonogen.

"I can not rest, and much regret
That human life's a short dole,
Too brief, alas! for one to get
A rime for Lanthanium Ortol.
There's Thiocarbamide as well,
Strongly tempts one to profanity;
Para-amidophenol's hard as h—,
Molybdenum's a breeder of insanity.

"Dianthracene is a word I hate,
Pyrocatechin I like no better;
But if there's worse than Monosulphonate,
I'm glad to say I never met her!

Here's 'Adurol' and 'Edinol'
And 'Little Giant' (that's Glycin) too,
Such names are only fol-de-rol,
And hardly fit to listen to.

"I need a Mascot! that's the thing;
One like Buchanan's big cat,
Then Pretar's praises I can sing,
And Holi-Plati-Ani-Stigmat.
The sharp these awful names invents,
Should be taught a lesson;
I'm certain sure their real intent's
To keep us poor chaps a-guessin'.

"Such un-nerving work I've never done,
As sure as I'm a Kelt, sir;
To the nearest drug store I must run
And drink a Bromo-Seltzer."

So spake this man of many years,
With expressions of derision;
His mocking laughter in my ears,
He vanished from my vision.

MACC.

PHOTOGRAPHIC CONVENTIONS.

Ohio-Michigan.—Zenobia Hall, Toledo, Ohio, March 15, 16 and 17.
President, C. L. Lewis, Toledo, Ohio.

Pennsylvania.—Rifles Armory Hall, Washington, D. C., April 18 to 21.
Secretary, Charles R. Gates, Lebanon, Pennsylvania.

Illinois.—Effingham, Illinois, May 2, 3 and 4. Secretary, J. K. Smiley, Kewanee, Illinois.

THE Illinois College of Photography, Effingham, Illinois, is making very extensive additions to its already large building accommodation. The new building will be three stories in height, covering a space 40 by 80 feet, and will be used for the engraving and photographic work. This space has been greatly needed in order to relieve the congested condition of the other buildings.

THE simplest hedgerow, contended Mr. Collins at the Scarborough Society, when viewed under some particular aspect of lighting or natural effect, can be not commonplace, but artistic. Even so prosaic an object as a lamp-post may be utilized to secure a pictorial effect — assertions which he proceeded to support by showing slides of actual instances of such use.

BINOCULAR PAINTING.

No contribution to art in recent years has excited more curiosity and caused more comment among artists themselves than the discovery at a recent exhibition made by William M. Paxton in the St. Botolph Club that the painter had been working from a new viewpoint; that he had made a departure productive of striking results, and which must surely have an influence on the work of other painters.

Mr. Paxton reasoned that, in painting, only the objects on which a pair of eyes were directed would be in focus, and that all outside the range of vision appeared double. He worked on this principle, the objects in focus he painted sharp and bold: the things he saw double he painted double, and the result has been remarkable. The critics found in viewing his picture that, no matter where the eyes might rest, they invariably turned to the central figure, and from that point only were able to take in the picture as a whole. They were at loss to understand in just what particular Mr. Paxton's work differed from that of other artists; but since the secret has been revealed, "binocularity" is a much used word in art circles in Boston and elsewhere.

Mr. Paxton did not claim to have made any great discovery; as a matter of fact, he had been painting from this viewpoint for six or seven years, and taken a prominent place among the Boston group of artists that has been called the best in the world. His pictures had already attracted wide attention; there was an originality about them; the method of treatment was such that they demanded consideration; but there was an atmosphere for which it was difficult to account, and the artist himself did not offer any explanation.

A young man, a hard worker, familiar with the methods of painters in this country and abroad, where he had studied under several of the great masters, he took up this question of binocularity very early in his career, and became convinced that true art lay in painting that which was seen with a pair of normal eyes, and painting the

objects as they appeared from one point of vision only.

The results justified his belief in the theory, and he steadfastly adhered to it, but refrained from offering any explanation while his reputation as a painter was not secure. It was not until his work had won the approval of artists and the public at large that he was willing to admit that he had been doing anything out of the ordinary, even when the critics had discovered the secret and used the word binocularity, which Mr. Paxton himself had not thought of applying to his method of treatment.

He wished his claim to distinction to rest upon the merit of his pictures as a whole, not because of any peculiarity of treatment; and it was not until the critics had placed their stamp of approval upon it and hailed it as "the latest word in impressionism" that the young painter felt assured that his work was freed from all suspicion of freakishness; that what he had aimed at would be accepted as a valuable asset in the painter's outfit.

While he is enthusiastic over his art, he is apparently content with the recognition he has received from his fellow-workers in Boston, and the prominence into which he has come since the St. Botolph exhibition has had its embarrassing features. During the time his pictures were on view, many of them portraits of prominent Bostonians borrowed for the occasion, the demand for tickets was unprecedented, the exhibition proving one of the most successful ever given at the club. This was not entirely due to the fact that Mr. Paxton had been hailed as an originator of binocularity in painting, for, although this feature was prominent in a number of the pictures exhibited, the collection had been seen by hundreds of persons and had been warmly commended before this feature of it was explained to the public. But when Mr. Paxton began to be referred to as the genius who was to out-Monet Monet, whose coming was predicted about a dozen years ago by the noted critic, W. O. Brownell, the interest increased.

Regarding this new idea, Mr. Paxton

says: "I do not think what I am doing in carrying out the idea of what they are calling binocularity will be the making or unmaking of art. I hope my pictures have other merit; but I think

mon sense view to take. You look at a figure, you know there is something behind it or alongside of it, but you can not see the object distinctly; at least you can see two objects instead of



Negative by Jos. R. Iglick,

Rochester, N. Y.

it may be, and will be, a valuable asset in the painter's outfit.

"That it can not be considered a freak idea is proved by the fact that I have been doing it for years and nobody has noticed it. After all, it is simply a com-

mon. Within a certain focus that which you see is single, but outside that focus all you see with two eyes is double, at least all vertical lines and vertically-inclined spots. My idea is to paint things as seen; and we see them with both eyes."

PHOTOGRAPHS ON WATCHES, CIGARETTE CASES, AND THE LIKE.

There is evidently a growing taste for photographic portraits on such articles as watches, gold or silver cigarette cases, match-boxes, etc., and the jewelers who undertake to get this class of work done usually charge a pretty good figure for it. A little while ago we were shown a watch on the dome of which was a portrait, for the production of which guineas had been paid. Of course, the jeweler did not do the work himself, but clearly he knew where to get it done, and exceedingly well done it was. Some year or more ago we saw a similar picture on a watch-case which, it was alleged, had to be sent to Switzerland by the London jeweler, for the work to be executed there, because it could not be done here. This picture and the other referred to were unmistakably by the carbon process.

It may be remembered that in 1901 we published a method of producing photographs on jewelry, trinkets, etc. (See page 451 of the volume for that year.) The method then described was by the collodio-chlorid process, but there is no question that pictures by the carbon process are, theoretically at least, more permanent than those by any silver one.

As the carbon method of producing pictures of this kind may be of service to many of our readers, we shall here describe it in detail. We shall assume, at once, that the reader is already quite familiar with the practical working of that process, for we may here say that any one who takes up the working of this process for the first time, and attempts to apply it to the present purpose, must not expect to meet with any great success in his first few essays. It goes without saying that it is the double transfer system that must be employed—the picture being developed on a temporary support and then transferred to the article desired. It will at once be seen by practical workers that the ordinary commercial flexible support is not suitable for the work, for the reason that it is too thick and unyielding to be pressed into sufficiently close contact on a convex surface, such as the dome

of a watch-case, for example, to obtain a perfectly finished transfer. It may, however, sometimes be successfully used for quite cylindrical articles.

For the above reasons it will be obvious that a more flexible and yielding support must be employed. One is the india-rubber support as first used by Swan; another is a film of collodion. We will deal with the former first. Some thin "foreign post" paper, the thinner the better so long as it will withstand the warm water in the development, is coated with a solution of india-rubber about the consistency of thin treacle. The best way of obtaining this is to get a tin of solution from the rubber stores and thin it down with benzole to the required consistency. It is poured into a dish and the paper floated upon it and then hung up for the benzole to evaporate. The paper had best be coated a few days before it is required for use, so as to insure that all the solvents of the rubber have thoroughly evaporated.

This india-rubber support is used in precisely the same way as the ordinary flexible support—the exposed tissue is squeegeed upon it, developed and then allowed to dry. The picture need not be alumed; indeed, it will be better for our present purpose if it is not. The picture is now ready for transferring to whatever may be required, which for the moment we will assume to be the dome of a watch-case. It is unnecessary to mention that it must be removed from the watch; this a neighboring watch-maker will do for one. The dome is then cleaned with benzole to remove all traces of grease or dirt. It is then coated on the outer side with a solution of gelatin containing a little chrome alum such as that used for double transfer paper. The following is a good formula to employ:

Nelson's No. 1 gelatin....	½ ounce
Water	10 ounces
Chrome alum, dissolved in	
1 ounce of water.....	6 grains

The dome is evenly coated with this and allowed to dry. To make the transfer neatly, trim the print to the required size and put it and the watch dome in

cold water for ten minutes or so. Next put the latter in warm water at about 105° to 110° F., until it just feels slimy. Then take the print, having previously marked it as a guide to position, and put it into the warm water and bring it in contact with the dome, of course avoiding air bubbles, and remove the two and press in close contact with a soft, dry handkerchief, gently rubbing toward the edges with the fingers so as to remove all superfluous water. It is then allowed to become thoroughly dry spontaneously. When dry, the back of the paper is moistened with benzole, and, after resting for a minute or two, the paper can be slipped off, leaving the picture firmly attached to the metal. Should any rubber remain on the picture, it may be rolled off with the finger or removed with benzole. It now only remains to varnish the work. The proper varnish for the purpose is a cold lacquer, and when dry is as hard and durable as the lacquer on our lenses. It is simply flowed over and drained off, and it dries in a few hours.

We mentioned just now that collodion might be used as the temporary support, and perhaps on the whole it is the best to employ. Here is the method with this: A glass plate, after being waxed or prepared with French chalk, is coated with ordinary enamel collodion thickened with two or three grains per ounce of pyroxilin, so that it yields a thick film. After the collodion has thoroughly set, the plate is put into a dish of water to soak and is afterward washed under the tap to get rid of the solvents of the collodion. The exposed tissue is then squeegeed on that, developed in the ordinary manner and allowed to dry. When dry, the film can be stripped off and trimmed and then mounted on the metal as just described. It is a good plan to trim the picture while it is still on the glass—a wheel trimmer and zinc shape is convenient for the purpose. The collodion film has an advantage over the rubber support, inasmuch as it is transparent, so that air bubbles can be seen, and the picture the better arranged in position. After the

transfer, the collodion can be dissolved off with a mixture of ether and alcohol.

In conclusion, it may be mentioned that for carbon pictures on metal, a tissue should be selected that contains a large proportion of pigment to gelatin, and should also be printed from a tolerably thin negative, so as to avoid a high relief in the image, which is objectionable in this class of picture, and, moreover, it serves to indicate the method by which it has been produced, which, in some instances, it is not desirable to do. —*The British Journal of Photography.*

FILM STEREO. NEGATIVES.

PROVO, UTAH, Feb. 12, 1905.

Some time ago you told in THE PHOTO-BEACON how you cut your film negatives apart and transposed them by fastening them to a plain glass with a strip of lantern-slide binding strip. I followed that plan until the N. C. film came out and since that time, for economy of space, have been cutting them as for above transposition, but instead of pasting to the glass, used a piece of ordinary court-plaster, about 3-16 by ½ inch, sticking half of the 3-16 on one edge over the "joint," then folding on to another side, then doing the same on other edge. This holds the negatives well and has given me a good deal of satisfaction because of smaller storage space needed.

No doubt your attention has been called to this, but I have not seen it mentioned. Yours truly,

C. E. BOTTOMLEY.

TO REMOVE FILM FROM A SPOILED NEGATIVE.

A correspondent writes that he finds the simplest way to remove the film from the glass is to hold the plate over a pan of boiling water for a few seconds, care being taken not to melt the film, until the film slips by the pressure of the thumb. Whenever it fails to come away easily again hold the film in the steam and so on until the film is removed.

THE FUN OF VELOX PRINTING.

The fun was not on my side. Oh, dear no; it was the other way about. I got laughed at, but I am not the first parent whose children have made him feel small. It happened in this way: A sample Velox printing outfit came one day, with a polite request that I should try it and report. This outfit lay on my table a long time—over a year, to be precise—and might have been there yet if one of my children had not come into the studio one day when sitters were scarce. “What,” she exclaimed, “have you begun to use Velox? I thought you only did your printing in carbon and platinum.” I explained that this was only a sample, but that I would show her how it was worked if she liked to stay.

We took the box into the room where the frames are filled, pulled down the yellow blind and lit the gas. While opening the box and mixing the developer, I said to my little girl that most of these new-fangled printing papers professed to save a great deal of time but that really they did nothing of the kind, and that the prints they gave were not worth looking at. Then I picked out a good strong negative and opened the packet of paper, which was marked “carbon.” Keeping away from the gas, I “filled in” the frame and exposed the paper and negative to the flame at a distance of five inches for sixty seconds, and, returning into the corner of the room again, I began to develop; at least I mopped some developer over the paper with cotton wool for a minute or two, but no sign of any image appeared. Eventually a ghost-like picture did come. “This paper is evidently very much slower than they make it out to be,” I said. “Or maybe you were in too big a hurry, you dear old fidget,” was the reply. Then I pointed to the instructions, where it said the image would appear suddenly, and asked her if she called five minutes sudden. A second exposure of two minutes brought up the image quicker, but one so black and so white that it was thrown into the waste-paper basket after its first brother. Four more attempts were all

equally bad, for after the second I had mixed a developer which I thought would give softer images and more half-tone, but which only fogged the image entirely. “Come and have some tea now; if you have twopence I will go buy buns,” said my little girl. Then she added, “After tea I will show you how to use this paper.” I smiled an incredulous smile, for I knew she had never made a print of any kind, not even a silver print. The tea was an unusually quiet one, for the little girl devoured the Velox instructions as she ate her buns and drank her tea.

“When you are quite ready, we will go and make some beautiful Velox prints,” woke me from my reverie.

“We will not try to make any more from that negative,” said my little girl. “It is too hard and much too yellow. We will try this one of the ducks.”

“That!” I exclaimed. “That won’t print; it is much too thin.”

“Hush. Seventeen, eighteen, nineteen, twenty. Done. Now come and watch me develop it. Is this the developer that came with the paper which you mixed first?”

“Yes.”

“You are quite sure you threw that last lot you made out of your own head away.”

“Yes.”

“Then look here.”

Deftly slipping the print into a dish of water for ten seconds, she then emptied the water out and poured on an ounce of developer: at once the image appeared. And in a few seconds she poured the developer off and rinsed the print with water, and put it to fix. Seven other negatives did she pick out, all of which I had put on a shelf to be intensified and made fit for printing some day. From each of these came a print, strong in the dark parts, pure in the high lights, with abundant half-tone.

“There, you dear old fossil, what do you say to these? Are they worth a penny each?” So I had to give her eightpence. “You stay here; I’ll be back in a minute.” In a few minutes she came running upstairs with another packet of Velox in her hand. “Where



Negative by A. B. Hargett,

Baltimore, Md.

THIRD PRIZE.

is that dense yellow negative you tried at first?" she asked.

I pointed to it.

"How long did you give that first print which was so pale?" she inquired.

"Sixty seconds," I answered.

Then, putting a new piece of paper in the frame beside the yellow negative, she exposed it for the same time.

"Come along and see some more magic." I went and saw, I am ashamed to confess it, a fine, soft print develop up quickly, suddenly I should say, in my child's hands. Reader, if you have never felt small, you belong to that class I have no wish to talk to. If you have, you will sympathize with me. Did not I get laughed at?

"Now, you dear old dad, when your printers go on strike, whistle for me, and I will do your prints all on Velox in less than a quarter of the time they do them in, and as for wages, let me see, I'll come for sixpence a day; and I want a new hat, and I should like a blouse, too. I am quite old enough to wear one, don't you think so?"

FRANK M. SUTCLIFFE.

P. S.—I learnt afterward that the second packet of Velox was of a different make from the first. It was labeled "Portrait." The baby had bought it with the eightpence at the chemist's opposite.—*From the "Velox Manual."*

A NEW COLOR PROCESS.

Somewhere about the end of March, Howe & Hall, 84 Wabash avenue, Chicago, expect to be in a position to place on the market a new printing process in color that will create quite a stir in photographic circles. We saw a demonstration of it just as we were getting ready for press, and have a single sheet of the paper to try, but this is written the day we saw the demonstration.

It is a carbon process, and as far as we can learn, some nine different colored pigments are coated on the paper in a rather empirical order to suit the ordinary run of negatives. During printing the light action extends down to the desired color, the result being a print in color that has a great deal of charm to it.

it must be remembered that the process tends to eliminate any developer stain which may already exist, and a negative showing pyro stain may be so effectually cleaned in the process of intensifi-

ments, when intensifying stained negatives by redevelopment with amidol, hence with such negatives we advise generally the use of pyro for redevelopment. If, however, the stain is very



Negative by G. K. Mantz,

Zanesville, Ohio.

cation that the gain in density is more or less counterbalanced by the loss in stain. This has occurred in one or two instances in the course of our experi-

intense, its partial removal may be a great advantage, in which case a non-staining redeveloper should be used.

Washing is all that is absolutely nec-

essary after development, but a small residue of undeveloped silver salt may remain in the film, and the brief application of a hypo bath will then slightly clear the image and produce a cleaner result. It will not affect the density to an appreciable extent unless development has been cut too short. The time of development need not, however, exceed from three to four minutes, and the process is generally complete in less time. We do not specially advise the hypo bath, as its effect is generally quite unappreciable, and its use necessitates longer washing. To avoid stains, keep the plate perfectly covered with the developer, and do not develop in bright sunlight; such a proceeding is quite unnecessary if the plate has been previously exposed, and strong light facilitates the production of stains. After an exposure of a few seconds in bright sunlight, or of, say, half a minute either at the window in diffused daylight or at a distance of three inches from an ordinary gas burner, the image will develop quite readily without being near any strong light. If these precautions are observed, and a clean, fresh developer is used, there is not the slightest probability of any stain appearing.

Washing after the bleaching operation is the most lengthy part of this process of intensification, but it can be considerably abbreviated. Wash in a dish under a good stream of water until the greater part of the yellow bichromate stain has disappeared—one or two minutes is generally sufficient to produce this effect—then remove the rest of the stain by pouring repeatedly on and off the plate a two per cent solution of either potassium meta-bisulphite or of sulphite of soda, acidulated with a few drops of sulphuric acid. The solution should just smell of sulphurous acid. It must not be used for many plates in succession, and should be thrown away immediately it shows any trace of a bluish coloration. By rocking the dish, the bleaching process can also be considerably hastened.

The bichromate bleaching solution will keep indefinitely if not used, but it deteriorates slowly by use. A stock bottle should be kept, and the amount

required for use (about two ounces for quarter-plates), may be put in a smaller wide-mouthed bottle and used repeatedly until its action begins to slow down. One-quarter of its bulk should then be thrown away, and an equivalent quantity of fresh solution from the stock bottle can be added to the working bottle.

It must be particularly noted that the precise amount of intensification reached depends absolutely on the proportions of the bleaching solution. The formula given will produce a useful degree of intensification equal to or perhaps slightly greater than that given by mercury and ferrous oxalate (when a five per cent mercury solution acidified with hydrochloric acid is used), but less than that produced by mercury and ammonia. It has been specially adjusted to give that effect, but by the time this article appears we hope to be able to give some other formulæ giving various degrees of intensification from a minimum useful quantity up to something probably exceeding the effects of mercury and ammonia. The formula given here will not produce the maximum intensification in one operation, but we have not yet completed our experiments in this direction, so can not say what is the maximum possible. We have, however, found that the process of intensification with any one solution may be repeated an indefinite number of times. Two intensifications with the solution described give an effect about equal to that produced by mercury and ammonium sulphid, while three give more density than is likely to be required. On account of the uncertainty of the results of the various mercury processes, an exact comparison is impossible.

When the process is repeated the developer must be washed out completely before reapplying the bleaching solution, otherwise stains will probably appear. The first bleaching gives a nearly white image, but each repetition gives a darker result and the color gradually becomes a yellow brown. This may be readily distinguished from the bright bichromate yellow stain which exists when washing is incomplete.

The process is excellently adapted to lantern slides by reason of the fine black tone it produces. The action is very rapid with the thin lantern plate film, and a slide can easily be treated once and left to its final washing within five minutes from the start.—*The Amateur Photographer*.

C. WELBORNE PIPER,
D. J. CARNEGIE, M. A.

PROTECTION for the hands with a film of rubber is mentioned in the following note, and should be of interest to carbon workers and others using bichromate: "A four, six or eight per cent solution of gutta-percha in benzin or acetone, when applied to the hands of the surgeon or the skin of the patient, will seal the surfaces with an insoluble, impervious and practically imperceptible pellicle, which will not allow the secretions of the skin to escape, and will not admit blood, pus or secretions into the crevices of the skin. This application has the great advantage over rubber gloves that it does not impair the sense of touch nor the pliability of the skin. After sterilizing the hands and thoroughly drying them, the gutta-percha solution is applied over the hands and forearms, care being taken to fill in around and beneath the nails. The hands are then kept exposed to the air, with the fingers separated, until thoroughly dry. The acetone solution dries quicker, but that in benzin is said to wear longer.—*Murphy, National Druggist, abstracted in the Pharmaceutical Journal*.

TO PRINT ON BROMIDE PAPER FROM A DENSE NEGATIVE.

Give plenty of exposure, then soak for about a minute in a weak solution of potassium bichromate, the strength being 24 grains of bichromate to 10 ounces of water. A very hard negative may demand a longer soaking of the paper. Wash in several changes of water, then develop in the ordinary way. In all probability, development will be rather slower than usual.

PLAIN PAPER PRINTING.

It is now nearly ten years ago since our editor, under his *nom de plume* of "Richard Penlake," gave, in these pages, particulars for preparing at home "plain paper" for printing. I tried it with great success at the time, and was very pleased with the results. As prints on rough papers and reddish tones are even more popular to-day, especially for exhibition purposes, than they were then, a few particulars of a newer method I have been working in America recently may be of interest to readers. The formula was, I believe, originally put forward by Mr. H. B. Hosmer.

For a great many subjects, prints on plain mat surface paper, such as Whatman's drawing, are far ahead of those on albumen or any other highly glazed paper. Take, for instance, a landscape or a marine scene, made first on albumen and then on a piece of home-prepared plain paper, and compare them: and, from an artistic point of view, I am satisfied that you will favor the latter, though, of course, you lose detail in the plain picture that will show in a glazed print.

Select a grade of paper that you think will suit you, and cut it into convenient sizes. Most any salting bath may suit your purpose, but the one that I have used and found very satisfactory, as well as being simple and easy to work, is:

Chlorid of ammonium (or sodium)	60 grains
Gelatin (previously swelled in cold water) ..	5 grains
Water (distilled preferred)	10 ounces

The gelatin is used to prevent the subsequent silver salt penetrating the paper, but it does not affect the tone. The salting solution must be slightly heated so that the gelatin will cover evenly.

Immerse the sheets, one at a time, by sliding under the bath, until you have a dozen or fifteen immersed, being sure that there are no air-bubbles on the paper. Let stand for two or three minutes and then remove two at a time and hang by the corners in clips to dry overnight, so that they will dry gradually.

and be sure that they are hung where no dust will settle on them.

This paper is now ready to put away for future use and will keep for any length of time if kept in a dry place. Before sensitizing, your paper must be thoroughly dried by artificial heat. The sensitizing solution may be prepared by either of the following methods—there is no difference, I find, in the results attained:

Nitrate of silver.....	60 grains
Distilled water	1 ounce

Take two-thirds of the solution and add concentrated ammonia until precipitate is formed and redissolved; add the remaining third of the solution, and, as a slight precipitate is formed, add ammonia solution, very cautiously, drop by drop, until this is just redissolved. The bath is now ready for use. Or use the following:

Nitrate of silver	60 grains
Citric acid	15 grains
Distilled water	1 ounce

Add to above concentrated ammonia until precipitate formed is redissolved. Either of the above silver baths will keep.

For silvering the paper, use a swab made of flannel, about three inches wide, or a soft, broad camel's-hair brush may be used. The sensitizing must be done in a yellow light. Pour the solution into a clean porcelain tray or dish that must be used for no other purpose.

Place a sheet of paper on a board, dip your swab or brush in the solution and coat the paper by applying it in transverse strokes, commencing at the top and working downward, seeing that every portion of the paper that wants silvering is covered. Then hang up by corner to dry.

When thoroughly dry, the paper is ready for printing. No more paper should be prepared than can be used the same day, as it does not keep. For each batch of prints make a new swab, and be sure to never use a swab that was used the day before; or, if a camel's-hair brush is used, be careful to wash it thoroughly directly after using and to hang it up to dry. Bear in mind that the most important part of silver-print-

ing, no matter whether it be on albumen or plain paper, is that your dishes, trays, paper, and in fact everything used in connection with the process, must be absolutely clean.

In printing, it is advisable to use a printing frame the size of the paper—that is, if you are printing on heavy paper with the negative masked so as to leave a white margin of three or four inches around the print. In this case the mask should be the size of the printing frame.

The printing should be carried considerably beyond the strength ultimately required, as a lot is lost in toning and fixing—more, in fact, than by any printing-out process I know of. Wash the prints for at least twenty minutes in several changes of water.

Bright red tones may be had by immersing the print straight from the printing frame into a hyposulphite of soda bath of one to five. The red tones are very pretty for some subjects but not suitable for all prints.

Tone with any of the standard gold-toning baths. A simple bath that can be recommended, which will give anything from a warm sepia tone to a black is:

Powdered borax	25 grains
Sodium chlorid	5 grains
Chlorid of gold	1 grain
Water	12 ounces

As gold acts upon plain prints with great rapidity, I recommend two grains of gold and slow toning, having not more than two or three prints in the toning bath at a time.

FOR PLATINUM TONING.

Citric acid	50 grains
Chloro-platinite potass....	1 grain
Water	12 ounces

Either of the above toning baths may be used cold. When toned, wash, fix (the fixing bath must be half the usual strength), and finally wash.—*The Photographic News*.

“A PRACTICAL WORKER.”

E. STANLEY THOMAS, Fremont, Ohio, writes: “Postal cards, Velox and P. O. P. prints dry flat if placed *face down* on stretched cheesecloth till dry.”

SILVER PRINTS WITHOUT TONING.

A printing-out silver paper which requires no toning may be prepared according to the following instructions, which are given in the *Photographische Industrie*. The color of the image will

is preferable to thick, as the fixing bath performs its work more effectively and with greater speed. The following formulæ contain borax, sodium phosphate and, as an alternative to the latter, tribasic sodium phosphate. When



Negative by M. L. Greene.

depend largely upon the character of the paper used. Rives papers which are sized with resin will give black tones, while papers that have been sized with starch or gelatin have a tendency to give warm brown tones. Thin paper

this last is used, the sodium carbonate may be omitted. As the phosphate tends toward black tones, and the borax toward brown, it is possible, by varying the proportions, to obtain any intermediate tone required. Potassium bichro-

mate acts as a strong restrainer and must be used with caution. When black tones are required, absolutely fresh chemicals must be used, but brown tones are more readily obtained when the borax, sodium carbonate, sodium phosphate and the tribasic salt have been freely exposed to the action of the air.

The salting solution for black tones is:

Water	20 ounces
Sodium phosphate	345 grains
Borax	170 grains
Sodium carbonate	85 grains
Sodium chlorid	45 grains

This is to be filtered, after which is added:

Potassium bichromate (10 per cent solution)	8 minims
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If the solution is protected from the air, it may be used until exhausted.

A suitable formula for brown tones is:

Water	20 ounces
Tribasic sodium phosphate	170 grains
Borax	345 grains
Sodium chlorid	45 grains

And after filtration—

Potassium bichromate (10 per cent solution)	7 minims
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The paper having been selected, cut to size, and the back marked with a pencil, it is floated face upward for from thirty to forty seconds on either of the above baths. This time will be sufficient for thin Rives paper. A thick paper with rough grain may require from one to two minutes, while a thin paper sized with starch or gelatin may not require longer than from twenty to thirty seconds.

Paper intended to give black tones should be dried in the dark as quickly as possible and protected from the air until used, which should be as soon as possible. Paper intended to give brown tones does not require the same care and may even be benefited by exposure.

The sensitizing bath is made as follows:

Distilled water	20 ounces
Silver nitrate	1 ounce
Lead nitrate	1 ounce

For black tones this bath, if acid, as is probable, must be neutralized by the addition of a few drops of a saturated

solution of sodium carbonate. The solution, which will become opalescent, must be exposed to strong daylight for two or three hours until the precipitate blackens and subsides. An acid sensitizing bath tends to give red tones and may be useful when warm brown prints are required. The solution should be filtered and be divided into two parts. One part is used as the working solution, and a proportion of the other should be added after each sheet of paper is sensitized, to keep the working solution up to strength, as a paucity of silver leads to dull, heavy prints.

The salted paper is floated on the sensitizing bath for from three to five minutes, according to its thickness. It is then removed slowly to allow the surface liquid to drain off, and is hung up in the dark to dry. In damp weather, heat should be employed, as it is not desirable that the drying should be prolonged. The sensitized paper may keep in good condition for about a week, if stored under pressure and interleaved with paper which has been soaked in a solution of sodium carbonate and then dried. It is better to sensitize only as much paper as is required for immediate use, and black tone-paper in particular should be used as soon after sensitizing as is possible.

The prints are to be washed in two or three changes of water and fixed in:

Water	20 ounces
Hypo	2¼ ounces
Sodium chlorid	250 grains

The whites in thin prints will become pure after about ten minutes' immersion, but prints on thick paper will require longer. If a fresh fixing bath is used for each batch of prints, they are likely to prove very permanent, as prints made by the process thirty years ago show now no signs of fading. After fixation they must be very thoroughly washed.

The tone of prints salted by the second bath may be still further modified by fixing in:

Water	20 ounces
Hypo	2¼ ounces
Potassium sulphocyanide	250 grains

Should a glossy surface be required,

a good and economical encaustic paste is:

Distilled water	1 ounce
White wax cut into slices.....	154 grains
Marseilles soap	154 grains

The wax and the soap are melted in the water by aid of heat, and form a jelly when cool. A small quantity of this is rubbed over the surface of the print with a piece of soft flannel, till the desired gloss is attained.—*Photography*.

HINTS ON ECONOMY.

Some one has said, "Only the rich can afford to buy cheap goods." This apt maxim certainly applies to the purchase of photographic material. Photography will prove to be an expensive pastime, indeed, if one tries to economize by buying cheap goods. This is an age of glaring advertisements, of attractive show windows and of enticing bargain counters. Until that expensive instructor, experience, has taught the young enthusiast his lesson, the department store advertisement offering prepared developer, three tubes for 5 cents (and other things in proportion) is apt to prove attractive indeed. I do not intimate that the department store is not a reliable place to buy photographic supplies. Many of them handle only first-class goods, and occasionally a responsible house will offer an article of real worth at a slightly reduced price, in order to introduce it quickly. But most chemicals, after being prepared for photographic purposes, deteriorate rapidly, and when an article is offered at a greatly reduced price, it is best to look upon it with suspicion. "Cheap goods are dear at any price," for they are not only worthless themselves, but cause the ruin of much that is good. The writer once had a dozen expensive plates hopelessly fogged by using a ruby lamp, *bought at a bargain*. Trade with a reliable dealer, one who understands his business. Insist on having fresh goods only, and be willing to pay the customary price.

Do not experiment—that is, if you are an amateur. It is not likely that you will discover any new combination of chemicals or method of procedure

that will revolutionize the science of photography, or make the work easy for the indolent or careless. Select one good formula and adhere to that until you thoroughly understand it. The average amateur, after repeated failure, usually lays the blame upon the particular brand of plates he is using, or upon the developer. Consequently he tries others, without better success. He then concludes that his lens is defective, and after a few more half-hearted attempts at picturemaking, disposes of his entire outfit to the secondhand dealer at one-fourth its original cost. To him photography has been an expensive nightmare.

It is wise to select a good brand of plates and use no other until the one selected is thoroughly understood. The same is true, let me repeat, of the developer, and I know of no better kind for the amateur (and for the professional, for that matter) than pyro. It is economy to prepare one's own developer, provided accuracy is observed in weighing and measuring. "A pint a pound the world around" may answer the purpose of a farmer without scales, but it will not hold good in photography. There is another advantage in preparing your own developer. The chemicals can be varied in amount, so as to bring desired results under certain conditions of exposure. While it is true that the effect of a slight under or over exposure may be to a small degree counteracted by skilful development, yet nothing will save a plate that has been greatly over or under timed. The most economical way to avoid errors of this kind is to make use of "The Photo-Beacon Exposure Tables." The price of the booklet will be more than saved on the first one or two dozen plates exposed.

Use plenty of developer. Do not run the risk of streaking your negatives by using less than a sufficient amount. Developer is cheap compared to dry plates.

Carelessness about hypo, about unclean hands and trays, about unlabeled bottles, and about too much light, is the cause of much waste of material. Have

a definite system. Have a place for everything and keep everything in its place. Let your object be artistic perfection, not how cheaply you can turn out pictures. Photography is an art that will well repay earnest and painstaking effort, and one that is well worth the expenditure of a reasonable amount of care, of consideration and of money.

W. F. GINGRICH.

THE MOST EFFECTIVE MOUNTANT.

Starch paste, says "Viewfinder" in the Lancaster *Daily Post*, besides being the cheapest of all reliable mountants for photographs, is one of the most effective. It is perhaps less convenient than the well-known "Higgins" mountant and those of a similar nature, inasmuch as it must be mixed from time to time as required, and there is no practical way of preserving it so as to retain all its properties. Its disadvantage is the trouble of preparing it, but beyond a certain expenditure of time—that involved in the waiting for the water to boil and that involved in waiting for the made starch paste to cool—the labor and skill required are hardly worth considering as factors against its employment. Any difficulty there may be in making starch only arises when an attempt is made to mix a small quantity, and the failure that generally occurs is that sufficient water to burst the granules—to turn the starch, to use the homely term—makes the resulting paste too thin to secure adhesion between the print and the mount. One writer says that success depends more than anything upon the vessel used. Absolutely boiling water is necessary, and as it is necessary that the starch granules should be subjected to water at nearly the boiling point for an appreciable time, a thick vessel which cools the small quantity of water too rapidly means failure; hence to succeed, a thin vessel must be used. To make a teacupful, which is as much as most amateurs require at a time, use a thin china teacup—a cracked or handleless one will do—and the paste may be made almost thick enough for the spoon to stand upright without support.

NOTICE.

The American Federation of Photographic Societies desires to announce the following competition, open to members of all organizations which belong to the federation or which may join before the closing date, as announced below:

LANTERN SLIDES.

For the best set of not less than six lantern slides, \$100 in gold and the federation gold medal.

To every other competitor whose slides are selected for the 1905 federation international set of one hundred slides, a silver medal.

To be judged worthy a place in this set will be recognized as the highest honor obtainable by makers of slides.

Points of judging as follows: Pictorial quality, fifty per cent; technic, thirty-five per cent; interest, fifteen per cent.

Competition closes October 1, 1905.

W. H. Moss.

Chairman Lantern Slide Committee.

THE PHOTO-BEACON.

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W. F. Oliver,

FIRST PRIZE.

Baldwinville, Mass.

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No. 4.

THE SALON OF THE AMERICAN FED- ERATION OF PHOTOGRAPHIC SOCIETIES.

Until I saw the salon on the walls I did not care to say very much about it, because long experience has taught me that light and surroundings make a very great difference in the appearance of a picture. To overhaul a lot of photographs as they are stacked round a wall in an ordinary room on a dull November day is not to take the best means of arriving at a fair estimate of their value. So I preferred to wait until the exhibition was hung in Chicago before I said any more about it.

I remember a lady once remarking to me that only a mother could have patience with children, and her own only at that. I have been reminded very forcibly of this phrase in the past few months, because we have had two decidedly opposite points of view expressed regarding this exhibit, one side finding it pretty nearly all right, the other pretty nearly all wrong. Now I have rather strong ambitions to be fair, though doubtless I am more influenced by my feelings than I suspect, seeing that I am only a human being, and whenever I feel myself in a position where I may be possibly one-sided I like to get an outside opinion.

Luck was in my way when I visited the salon in Chicago, because almost at the start I was joined by an artist friend,

a man well up in years, and who has always struck me as one of sober judgment. So, together we went round the galleries, and I let him do all the talking. His own special line has been portraiture, so I was rather interested to note that only once did he pick out portraits for comments; all his attention seemed to be concentrated on the landscape and genre subjects.

Again, I noted that he never once made an unfavorable comment on any of the photographs. He picked out the ones he liked, enlarged a little on the special features that he thought good and then passed on to the next frame. When I go round a gallery with photographers it looks to me as if all they can see are the things they don't like.

Once we had gone the round I asked him if he would point out to me such photographs as he considered should not have found a place, and in response he said that there was only one that he would conscientiously reject; all the others he considered to have justified their existence.

I noted with interest that not one of the photographs he selected belonged to the type that is supposed to be of the American school, and this rather surprised me, because a little later we went together through an exhibit of the work of one who is considered to be one of the world's greatest living landscape painters, whose style is decidedly

impressionistic and whose work he much admired. So, evidently from his point of view the impressionist workers in photography do not hit the nail so squarely on the head after all.

We in Chicago have had considerable experience with photographic salons. Our policy from the start has been to give every phase a fair show, and not to tie ourselves down to any one school. In selecting our juries we have never adopted the same plan twice. We have had extremists in photographic art for one jury; one year we tried all painters; another year we had a mixed jury of painters and photographers, while another time we tried to get a jury in which all schools of photographic art would be represented. We do not think it fair to the great photographic world to allow any one phase of thought to predominate. Were we to be again responsible for salons we would probably endeavor to repeat our past history. My one regret in connection with the federation consists in the fact that at present it does not include all phases of pictorial effort in the American photographic world. We are all trying to solve a big problem, one so big that no one man or men of one line of thought can claim to find the answer, and it seems to me it would be wisdom for one and all to quit wasting so much valuable energy in bickerings and devote it to ends that will bring more tangible results.

The federation exhibit in Chicago is the best salon exhibit we ever had, but it is not the best possible, since one important organization stands aloof, and personally I would like much to have it working in harmony with all the other bodies, yet retaining its individuality as do the others.

Space does not permit giving copious extracts from the Chicago papers showing what the Chicago art critics think of the Federation Salon, and so our readers must content themselves with an extract from an editorial in the *Tribune*, which was devoted to the work of the Art Institute as a whole, so that the appreciative comments about the photographic display were rather inci-

dental. It is high-water mark regarding photographic salons in the Chicago press.

"The walls of the extreme south rooms are crowded with the work of the various societies of photographers included in the American Federation. It is many a day since the Art Institute has offered anything more attractive than this display of camera work. It was long the reproach of the photographer that it was simply a copyist, without skill and without art, without color, feeling, handling or values, having the same relation to the real picture that the orchestrion has to the orchestra, or the graphophone to the human voice. That reproach no longer remains. In these hundreds, perhaps thousands, of views almost entirely devoted to landscape, the operators have caught not merely the absolute portrait of nature — this was to be expected — but nature in her varying moods, the atmosphere, feeling, color and expression. In studying these views which are not all made upon one model, but differ as widely in their methods as works on the canvas, the individualism of the operator, his temperament, his method of treatment, his artistic vision and his mode of expressing himself are as apparent as if he had worked with tubes or paint-box. The thoughtful observer, looking over this large and interesting collection, can not but ask the question: May not the camera, when the secrets of color reproduction are fully solved, supplant the brush and palette as a medium of genuine and effective art expression? Is not photography, like electricity in the scientific world, the coming agency in the artistic world, and does it not offer the solution of that problem of combining the useful and the beautiful, which so many of the arts and crafts reformers are studying?" — *Chicago Tribune*, March 7, 1905. F. DUNDAS TODD.

FROM the Century Camera Company. Rochester, New York, comes the first catalogue of the year, which is devoted to the recognized merits of Century Cameras. It can be secured at any stock house or will be forwarded on request.

PORTRAIT COMPETITION No. 14.

The correspondence relating to these portrait competitions is to me the most interesting part of the work in connec-

the fruits of other people's effort, whereas the one with genius exerted himself to make better and better results. After all this is but another way



J. H. Field,

Berlin, Wis.

SECOND PRIZE.

tion with them. Every month many of the competitors give me an insight into the workings of their mind, and the one thing I like above all others is the great desire evinced by most of them to make better work. Recently I came across a definition of the difference between taste and genius, which consisted essentially of this, that the individual who had taste for a certain thing enjoyed

of expressing the other famous definition of genius that it consists of an infinite capacity for taking pains. I think it may safely be assumed that those who persistently follow these competitions month by month are certainly possessed of genius for photography, as the majority are certainly exerting themselves in order to do better work.

Of late I have heard little of the old

story that the prize-winning pictures are commercially impossible, that is to say, that they are not deliverable to the customer. Seeing that the very first rule calls for prints that are produced in the ordinary course of business it may safely be assumed that one and all were deliverable, therefore the photographer who thinks otherwise is merely letting the world know that his customers have a different kind of taste, and so the argument falls to the ground. In these competitions I am not looking for the highest type of artistic portraiture, but I do want to show the very best work that is salable in the ordinary course of business.

Many photographers tell me that as a consequence of taking part in these competitions they have revolutionized entirely their ideas of lighting and posing, with considerable advantage to their pockets. I sometimes think photographers are in error when they assert that their customers do not like artistic work, and I believe the principal trouble lies more with the photographer than with the customer: in fact, I suspect he has false ideas regarding art. Let me illustrate this point. Until a couple of years ago I had no hesitation in avowing that I did not like classical music. One night I attended a lecture on music by one of the greatest musicians in this country, and he brought great comfort to my heart when he quietly informed his audience that he did not blame the average individual for disliking what was served up ordinarily as classical music, but of which about ninety-five per cent was a miserable imitation.

Until about six months ago, acting upon this unreasoning prejudice regarding classical music I carefully avoided going to any concert where, for instance, Wagner's music would be played; but one afternoon at the St. Louis Fair I happened to hear one of the bands play what I thought was the finest bit of music I had ever heard in my life, and on referring to the program I was surprised to find that it was the overture to "Tannhauser," and since then I have had the pleasure of hearing it

three times, with ever increasing enjoyment. Still more recently a lady friend who happens to be a very fine musician provided me with a two hours' entertainment one evening from the best composers, and I was simply amazed to find that her repertoire consisted practically of old favorites of mine, hardly one of which I knew by name, or its composer. I found that for many years I had been a keen admirer of the very best music without knowing it. I am suspicious that the same thing is true in the world of art; that there are more people who can appreciate true pictorial quality than the world suspects, but that an enormous amount of trash is everywhere masquerading as the real thing, and it need scarcely be said the photographic world is far from being exempt. No photographer is justified in stating that his customers do not like artistic portraiture until he has decided proof given to him from an authoritative source that he is capable of making artistic work.

About a month ago a number of readers expressed the hope that some of the competitors would vary a little by sending groups, because the most trying problem a photographer has to meet in his daily work is the making



of bridal, family and scholastic groups. This is certainly a difficult problem and I must confess I have but rarely seen a group that possessed any claim to pictorial merit. Almost twenty years ago a photographer who was rather noted for his work in this line stated to me that the principal difficulty the photographer had to contend with consisted

in this, that the customers naturally demanded that every portrait should be recognizable, and to secure this desired result every sitter's face, including the eyes, had to be in evidence.

three, but the problem becomes more difficult when the number is increased. Two of the pictures submitted this month each deal with a family group of three persons, and in both a book is



E. Berkeley,

Staunton, Va.

THIRD PRIZE.

I have frequently thought that to make a group with some pictorial merit the photographer must suggest some reason for the members being gathered together, and this is certainly possible when the number is small, say two or

the reason for the individual members being so close to each other. H. P. Robinson, writing of groups in his book, "The Studio and What To Do In It," enters quite fully into this problem, and points out that the heads must not

come exactly in a straight line, but that they must be arranged informally, both as regards height and the distance apart. Now let us look at the groups which have been reproduced for this issue, and we will find that in the group of the three boys the photographer has given due heed to this point. The heads are arranged in a curve; two of them are close together, while one stands apart; even the attitudes of the heads are different. In the other group, however, there is much more uniformity, because the heads are in a straight line and the spaces between are practically equal.

Going still farther into the arrangement, the main lines of the boy group are less pleasing to me, because the bounding line which runs from book up the arm of the boy on the left along the heads, down the arm of boy on the right, through the arm of the boy in the middle and so back to the book again is less pleasing than I think it might have been, for I have a feeling that if the leaves of the book that are now lying down had been turned up the result would have been a better curve. In the other group all the lines tend to parallelism. As a minor point I would prefer if the boy had changed places with the girl at the other end of the line, because her dress would have given more variety of outline, and I think a full view of his face would have been more satisfactory than the profile.

But to come back to the point about making portraits in a group that was emphasized by my old friend, I find that Mr. Robinson took care of this point in his work, as will be evident from the little drawing from his book that is here reproduced. The motive is the very same as that chosen by both photographers, but it will be observed the volume is made to play a very minor part. The idea seems to be that the children while busy over their books have been interrupted and have just looked up to find out the cause. Here we have the essential from the parents' point of view, since each is a portrait, but the artistic verities have been observed in the placing of the heads, which are at different heights, but yet, kept together

by a curved bounding line, are arranged with different distances between them. The book being small permits natural and varied groupings of the hands. The effect is very natural, very charming, quite in accord with certain basic principles of pictorial composition, yet each face is a portrait, and I have no doubt the result would be deliverable to the customer and willingly paid for.

Coming now to the prize pictures, the winner of the first prize rather amused me by a little note that he attached to the print, to this effect: "The only medal-winner of my acquaintance once said, 'show me your subject,'" and to emphasize the point he encloses a first proof from the negative. A comparison of the two shows to my mind that the photographer retouched the negative with great judgment, softening judiciously the lines that time had wrought, but he carefully retained the essential features of the sitter so that I am certain he succeeded in getting an excellent likeness. The principal curves and tones are faithfully kept, though the latter have been blended with considerable advantage, but still I feel that a straight print from the negative might have been acceptable to the subject. The sitter belongs to the well-nourished type of womanhood in whom one naturally expects curves to predominate, and so the photographer has worked out his scheme of composition with that idea in mind. There is not really a straight line anywhere, and even the casual observer will notice the beautiful curves that bound the figure. In the original proof there is considerable detail in the bust, but in the finished print this has been softened, presumably with the purpose of concentrating the interest on the face. The print is in a very delicate sepia platinum and is mounted on a card of the same color of a tone that is a little lighter than the hair.

Before one can proceed to discuss the second-prize picture, it is essential that one decides what the motive of the maker was. This is a point that one too frequently forgets, because, after all, we must remember that success

really consists in hitting the mark that is aimed at, and by this one's efforts must be judged. The higher the aim the more difficult to attain success, but the more credit is due. The photographer who attempts to portray a quality of the sitter's mind is aiming much higher than the men who simply desire to make a map of the face. In viewing pictures in company it has been impressed upon my mind again and again that very few people ever seem to catch on to the conception of a sentiment in connection with a subject, but concern themselves mainly with technic. With this idea in view, the moment we look at this picture our eye naturally is attracted to the book, which is cleverly suggested, but is not too much in evidence. One is therefore justified in assuming that the photographer desired to suggest intellectual force of the student type in his sitter, and we are therefore justified in examining the rest of the print to see if he has succeeded in working out his idea. Resting on the edge of the book is a hand, and it is now admitted that one's hand is a good index of character, so that its style ought to be of the student type. Long fingers are recognized as belonging to people in whom the brain is well developed, so the photographer has proved by this simple pose to those who can read that his interpretation of the young man's temperament is correct. Nay more, a reader of hands would insist that his intellectual development was probably more along scientific lines than in any other direction. Having learned so much we now proceed to the face, and there we find the photographer has been at special pains to concentrate his light on the temple and to throw the rest of the face into shadow. Many readers will, of course, object to the dark drapery and background, but once they realize the photographer's purpose, I think they will be forced to admit that he has achieved it, and I would like those who object to start out with a similar preconceived idea and secure it in some other way.

The third-prize picture is a very excellent example of good technical pho-

tography, posed along good safe pictorial lines and lit according to sound principles. One does not expect intellectual force in a sitter of this age, and so the photographer has been wise in adopting a simple pose such as a healthy, happy girl would naturally adopt.

GENERAL MENTION.

Runyun.—The shadows of hair and on back are far too black. The print is much too small for the size of head.

Zarley.—Light and shade should never be equal in area; variety is the key-note. You have taken a front view, and the lighting is practically equal on both sides.

Druse.—Too much space above the head, with the result that the sitter looks small. The white margin on print simply kills all the delicate half-tones of the face.

Gleerup.—The modeling is certainly very good, but there is too much detail in the beard and skin. The pose is rather rigid.

Pleas.—This is the best thing from you yet, as it indicates a feeling for tone that you have not shown before. I think, however, that the dark on the shadow side of the face should be deeper.

Bigalow.—You are the victim of a big chair. Such an accessory ought to be put in a corner or out of sight, preferably the latter.

Hage.—The big high light on the temple simply ruins the harmony of the delicate tone in the rest of the print.

Jno.—Another impossible piece of furniture. Pose is too stiff. Lack of quality in the face.

Godfrey.—Came next to the prize-winners.

No Name.—A very dainty portrait of a child, full of fine tone quality.

RULES.

1. Only one print to be submitted in any one month, and this must be from a negative made in the ordinary course of business within sixty days of the date it was mailed.

2. The pictures will be judged on the first day of each month, and all

prints received prior to that date will be included.

3. Requests for private criticism, accompanied by fee of \$1, may be sent along with the print and will be answered after the judging is over.

4. Mark outside of package with the words "Portrait Competition."

5. Prints are not returnable.

PICTORIAL COMPETITION No. 83.

The lantern slide competition is never nearly so popular as the others that occur in the course of the year, and the one this month is no exception to the rule. The following are the awards:

First prize — John M. Schreck, 169 Mariner street, Buffalo, New York.

Second prize — J. C. Jansrud, Willmar, Minnesota.

Third prize — R. E. Weeks, 166 Lake street, Chicago.

Special mention — G. A. Smith.

FUTURE COMPETITIONS.

Competition No. 85 — Waterscapes. Closes April 30.

Competition No. 86 — Branch of a tree without leaves, with special consideration of decorative effect. Closes May 31.

Competition No. 87 — Domestic animals. Closes June 30.

Competition No. 88 — Genre pictures, or pictures that tell a story. Closes July 31.

Competition No. 89 — Branch of a tree with leaves, with special consideration of decorative effect. Closes August 31.

Competition No. 90 — "At Home" portraiture, that is, portraits not made in a studio. Closes September 30.

Competition No. 91 — Snap-shot pictures. Closes October 31.

Competition No. 92 — Landscapes. Closes November 30.

Competition No. 93 — Flower pictures. Closes December 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the

sender's name and address, *but nothing else*. The outside of the package in addition to our address may bear that of sender. Accompanying, a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given; also the printing process.

2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

3. Prints are not returnable.

PRIZES.

First — Books to the value of \$5.

Second — Books to the value of \$2.50.

Third — Books to the value of \$1.

Any books, on any subject, or, if preferred, any article we can buy in Chicago.

M. BALAGNY'S BACKING COMPOSITION.

Impressed with the many inconveniences of the ordinary media for backing compositions, which sometimes scale or form dust, but at other times absorb water and become adhesive, M. Balagny undertook a series of experiments (*Bulletin of the French Photographic Society*, September 1, 1904, p. 425), the result being that he adopted a backing prepared with a boracic solution of white (bleached) shellac as a medium, this giving a backing which in no way disintegrates on a journey, whether as scale, dust or paste. The backing can be removed quite easily by means of a damp sponge, and this should be done before development. The medium for the backing is prepared by dissolving 240 grams of bleached shellac of good quality, and 40 grams of borax, in 1 liter of water, heat being necessary, and sometimes rather prolonged boiling. When the shellac is dissolved, add 4 grams of carbonate of soda, and 4 c. c. of glycerin. To compound the actual backing mixture, equal parts of burnt sienna and dextrin are stirred in until the consistency is such that the mixture can be conveniently applied with a brush.

REMINISCENCES AND RAMBLING
RECOLLECTIONS OF EARLY
PHOTOGRAPHIC TIMES.

CHAPTER II.

Great was my delight when I read in the *London and Edinburgh Philosophical Magazine* of March, 1839, Fox Talbot's announcement of his wonderful invention of photography, which he named "Photogenic Drawing," by the action of light through the camera, producing negative pictures on paper, from which copies, or positives, in any number could be produced, in correct position, with natural light and shade. In March of the same year (1839), Sir John Herschel reported to the Royal Society his discovery of the solvent action of liquid hyposulphite of soda for fixing photographs, which has been in constant use for that purpose till this day. This announcement was immediately followed by the publication of the electrotype process for depositing metals on metals, by means of electricity. In August, same year (1839), came the announcement of Niepce and Daguerre's silver plate process of photography, which was simply the combination of the vapor of iodine with the silver on the plate, forming iodide of silver, in which condition it was ready for placing in the camera. It required a very long exposure in sunshine in the open air, and was then developed by vapor of mercury, fixed, washed and dried. In June, 1839, Daguerre had reported his discovery with specimens, which were shown to the scientific world of Paris. These the French government submitted to the Academy to be reported on, previous to the purchase of the secret method of conducting the process. Daguerre was acquainted with M. Arago, and his influence with the French government was of great assistance to him. Arago was enthusiastic over his friend's productions, recommended delay in publication, and with his friends hurried the government to make a grant to Daguerre to purchase his secret. In July a bill was passed securing to Daguerre a pension for life of 6,000 francs, with reversion

of half to his wife, also 4,000 francs to the son of M. Niepce, with like reversion to his wife. M. Duchatel, the then minister of state, gave as the principal reason for voting this handsome pension to Daguerre, "that the invention did not admit of being secured by patent, for as soon as published all might avail themselves of its advantages." France then declared that she had purchased the secret of the process for the glory of endowing the world of science and art with one of the most wonderful discoveries which conferred honor on her native land. M. Arago said: "This discovery France has adopted, and from the first moment she has cherished a pride in freely giving it to the *whole world*, a boon to universal science, a donation to the arts."

In the face of all these representations, as soon as the French government had settled the pension matter in favor of Daguerre, he made arrangements with an Englishman named Miles Berrey to procure a patent for Great Britain in London. It was known that the latter country did not grant patent protection to foreigners, so a native was arranged with to secure the patent. This was granted, dated August



MISS PRIM.

14. 1839 — unusually smart work — and supposed to run for fourteen years. It was generally considered to have been obtained by some undue influence.

A Mr. Baird of London was selected to become photographer and licensee to work the process and sell licenses to those who might want them. There was no doubt that this had a deterring influence, and many who otherwise would gladly have joined the pioneers in the development of the photographic art in silver plate preferred to leave it alone, rather than risk the possibility of law proceedings or continued annoyances, and went in for the study and practice of Talbotype photography. The silver plate process, through the influence of Arago in France, gave the type of Daguerre the name "Daguerreotype," which stuck to it through thick and thin, although not a single portrait from life was ever taken by it. All the nations of Europe — save one — and the whole hemisphere of the new world welcomed the French government's gift. They received the free use of it for all their subjects who could use it on such objects as it was suitable for; the pictures were beautiful, but, as mentioned, the process was slow.

It was admitted in Great Britain that a monopoly existed and, in a manner both unjust and injurious, upheld by means of the patent, which in its origin was bad, and its continuance disgraceful, as was admitted by unprejudiced persons who were at all versed in the subject of the patent and common law of the country, and was put very clearly by an able Edinburgh reviewer, "The public should be rendered thoroughly aware that something like a deception must have been practiced upon Her Majesty's Attorney-General when he allowed the patent right to be legalized. It was clear that Daguerre had no property in the invention when the obnoxious patent was granted, as he had previously and entirely sold it to the French government, and they gave it freely as a gift to the *whole world* — a boon to universal science, a donation to the arts."

It was well known that a number of

scientific men had been for years working and experimenting with various materials, noting the changes by the action of light upon them — i. e., Fox Talbot, Sir John Herschel, Robert Hunt, John Goddard, etc. It was also known that Fox Talbot invented a silver plate process by the action of iodine on silver plate and produced pictures by it in 1838, a year before Daguerre's announcement. He did not publicly report it, as his object was rather to perfect a process to produce negatives on paper, from which printed copies in numbers could be produced, and it was said that he could have claimed the process announced by Daguerre as his had he so willed it, as many were aware of the fact.

John Goddard discovered the peculiar accelerating power of chlorine in combination with iodine on silver plate, and found the increase in sensitiveness remarkable. Continuing his labors further he discovered the action of bromine in combination with iodine, on silver plate, to be more so, and he was enabled to produce portraits from life by the action of light in the camera, by a few seconds' exposure — for the first time in the world. This great achievement was accomplished by him, and he gave his complete process to the world without fee or reward early in 1840, but unhappily depending on a grateful, or ungrateful public, silent neglect was his lot, although every photographer in the world who took portraits *from life by the silver plate process adopted and used the type of Goddard*, and never took a single portrait from life by the type of Daguerre, yet falsely the name of Daguerre was attached to all, or nearly so, and remained until later, when the silver plate was generally superseded by the collodion positives and negatives. So far as Daguerre was concerned all photographic efforts by his type ended in 1840.

The Daguerre patent aroused much feeling in scientific circles in Great Britain and seriously retarded and cooled interest there for some time. Many threats of prosecutions and lawsuits were made by the patentee, if any

one dared "to work the Daguerreotype without first obtaining a license." He placed spies all over the country — and even attempted to put down the sale of apparatus (which the patent had noth-

charges in consequence of the patentee having, on an *ex-parte* statement, obtained an injunction against him, which injunction, however, after three days patient hearing (June 2, 1845) the vice-



Negative by Leonard,

Racine, Wis.

ing to do with). One instance may be quoted. Mr. Edgerton, who had improved and introduced many economical forms of apparatus, was subjected to much annoyance and heavy law

chancellor dissolved with costs. It seemed as if a more glaring piece of unmitigated impudence never was perpetrated than this injunction business, i. e., the attempt of the patentee to pre-

vent the use of apparatus — camera obscura, etc.— which had been in use for over a hundred years, and it was little to be wondered that the scientific people of Britain did not form a very high opinion of Daguerre's liberality to science or art, and many who otherwise would gladly have joined the pioneers in the development of the silver plate process preferred to leave it alone, rather than risk the possibility of law proceedings or continued annoyance.

But I need not dip very deeply into the history of photography; that has already been given more fully and correctly in this journal, as those interested will find by referring to the numbers February to May, September and December, 1890, as well as in *Wilson's Photographic Magazine* for October and November, 1890.

But to our tale. It must not be overlooked that in those years — 1839-40-41 — the general world knew little or nothing about photography or its practice; only those who were scientifically inclined, or who had studied or explored its mysteries were aware of the methods or materials required for its operation, and little information could be obtained — printed or otherwise — the necessary materials and chemicals for experimenting had to be found where best they could, and these were very high in price for some time, which kept many from indulging in such pastime. No stock houses then existed, as at the present time. Chemists and druggists who sold chemical appliances took in for exhibition and sale photographic and electric materials and chemicals, but this was mostly confined to large cities. At this time my interest in electrotyping and mechanical movements was keen, and I took every opportunity to hear all discussions regarding the Talbotype and the later published silver plate Daguerreotype, and set about getting a camera box and other appliances made, but as certain "photogenic drawings" could be produced without any camera or lens, it gave me great pleasure to prepare the paper and take negatives from small engravings, certain kinds of leaves, ferns, etc. From the paper

negatives I printed positives, and these looked — at that time — very nice, were interesting and encouraged me in my future efforts.

My masonic apprenticeship was now pretty near a close and I had been chiefly engaged in building in connection with railway construction, my people being connected with the railways. At the close of apprenticeship I became engaged in a long lease of railway life, and was located in one of the ancient Royal Burghs of Scotland, where every foot of ground teemed with historical interest, and in my position had opportunities of seeing, meeting and coming in contact with all kinds and conditions of mankind. Having a natural inclination for matters scientific, and associating mostly with men who were considerably my seniors in years, I got much valuable information, as many of them were men of mark, and did their share in distributing verbal knowledge, although decidedly adverse to having their ideas appear in print.

PETER DOW.

(To be continued.)

A HINT FOR MAKERS OF ENLARGED NEGATIVES.

In order to overcome the inconvenience of a reversed print by the carbon process, some workers have resorted to the expedient of putting the plate for the enlarged negative into the carrier with the glass side outward. This has entailed the reversal of the ground-glass screen in the camera, with some trouble in taking out screws, the danger of their working loose and also the danger "lest we forget" to restore to its usual position. A simple way out of this difficulty is to dab the ground-glass side of the screen with a little oil in spots, and then to wafer on to the outer polished surface a piece of jeweler's tissue paper by which the thickness of the glass will be allowed for in focusing. The paper is easily removed and a rub or two with a rag will restore the ground glass to its normal condition.

TONING BROMID PAPER.

Much has been written about toning bromid paper, but the subject has not been exhausted by any means. In fact, I, for one, am just beginning to believe that many failures in this class of work which have been regarded as the result of faulty manipulation are in reality caused by the developer and the toning process used in combination. My work during the past year substantiates the statement that prints developed with a certain developer will tone well with some processes and not with others; while on the other hand, a certain toning process may be eminently successful on prints developed with amidol, for instance, but will prove entirely unsatisfactory on prints developed with hydroquinon. As very little has been published concerning this feature of toning bromid prints, at least to my knowledge, I give my experiences to the readers of this magazine for what they may be worth.

Although nearly all of the well known developers, with the exception of pyro, will produce good black and white prints on any brand of bromid paper, a somewhat extended series of experiments has convinced me that the developer used has considerable influence upon the results obtained by the various toning processes. For instance, metol-quinol has always been advocated as a fine developer for making black and white prints, and experience shows that it is so. The following is perhaps the best of many formulæ which I have tried:

METOL-QUINOL DEVELOPER.

No. 1.

Metol	50 grains
Hydroquinon	25 grains
Sodium sulphite (crystals) ..	1 ounce
Water up to	20 ounces

No. 2.

Sodium carbonate (crystals) ..	$\frac{1}{2}$ ounce
Potassium bromid	20 to 30 grains
Water up to	20 ounces

To develop: Take equal quantities of each.

With this developer the results are reliable and perhaps on the whole quite as good as can be obtained with any

other agent. The formula certainly has many advantages. It is cheap; keeps better than amidol; works faster than rodinal; can be easily modified to suit any brand of paper and has the greatest range of tones. As a developer of prints to be toned to a different color, however, it is an entire failure. Strange as it may seem, I have been unable in my experiments to tone prints developed with the above formula by any of the commonly used toning methods. With some processes the prints would not tone at all, and in no instance were the results pleasing or in any way satisfactory.

Amidol seems to produce prints which lend themselves more readily to most toning methods than any other developing agent. Iron oxalate is hardly satisfactory and with uranium nitrate usually stains the whites, but every other process I have tried on these prints has been pleasing in results. The objection to the use of amidol is that it does not keep well in solution even with sodium sulphite. The agent forms an energetic developer in the presence of sodium sulphite without the addition of carbonates or caustic alkalies, and gives clear prints without stain or fog. By the addition of a little fresh developer from time to time the solution may be used repeatedly until exhausted, but only enough should be made at a time for one day's use. The formula given below will yield fine prints for toning:

AMIDOL DEVELOPER.

(Concentrated Solution.)

Water	6 ounces
Sodium sulphite (crystals) ..	$1\frac{1}{2}$ ounces
Amidol	$\frac{1}{4}$ ounce

To develop: Take concentrated solution, $1\frac{1}{2}$ ounces, bromid of potassium (10 per cent solution), 8 drops, water 6 ounces. The image should appear slowly and should be allowed to develop up strong, clear and brilliant, as it loses some strength in the fixing bath.

Sepia tones have come into almost universal favor with both the professional and amateur photographer and are perhaps more to be desired than any other colors. Without doubt the

hypo-alum bath is the most used process and prints developed with amidol lend themselves very readily to this method, giving rich brown and sepia tones, which are believed to be permanent. It is preferable to dry prints before toning to decrease the liability of frilling and blistering, although they may be transferred to the toning solution after they are fixed and washed. If the prints are first immersed for five minutes in a hardening solution, there will be little tendency to frill or blister. This hardening solution is the same as the toning solution, but is used at the normal temperature of from 65° to 70° F., while for toning the solution should be used hot at about 130° F. The formula is as follows:

HARDENING AND TONING BATH.

Sodium hyposulphite10 ounces
Ground alum 2 ounces
Hot water, about 130° F... 2 quarts

First dissolve the hypo in the water and then add the alum. The solution will be milk-white and should be allowed to settle for at least twelve hours before use, when the clear may be decanted off. Never filter it. After five minutes in the cold bath the print should be removed to the hot bath, where it may remain until the desired tone is reached. This will require from ten to thirty minutes. When toned the print should be immersed for five minutes in a second hardening bath to prevent any possibility of blisters. This is prepared as follows:

SECOND HARDENING BATH.

Alum ½ ounce
Water1 pint

Many workers believe that better tones are produced by using the toning bath cold. In this case only one bath is necessary and the first and second hardening baths may be dispensed with; toning in a cold bath, however, requires from fifteen to twenty hours, but may be conveniently continued over night.

The hypo-alum bath requires more time than the majority of workers are willing to spend, and I give below a

method which is in every way superior to it. The formula is used by many bromid enlarging firms, who claim that the tones are more beautiful than can be obtained with hypo-alum and are also uniform. The solutions are:

SOLUTION A.

Water12 ounces
Potassium ferricyanid ... ¼ ounce
Potassium bromid ¼ ounce
Ammonia enough to smell
strong2 to 4 drops

SOLUTION B.

Water24 ounces
Sodium sulphid ¼ ounce

These solutions must be made up fresh each time.

Immerse the print in solution A and allow it to bleach. After bleaching wash it well and immerse it in solution B until toned to the right shade, when it should be washed again thoroughly.

Both this and the hypo-alum bath, although not very satisfactory with prints developed with metol-quinol and hydroquinon, will tone prints developed with amidol, ferrous oxalate and rodinal very nicely and produce fair tones on prints developed with edinol.

Most toning processes are preceded by a bleaching solution similar to solution A given above, and many prefer to bleach prints before immersing them in a cold hypo-alum bath. The tones will be slightly different, and it is a matter of individual taste which are best. The two formulæ which follow will be found quite satisfactory with any process requiring a bleaching solution:

MERCURIC BLEACHING SOLUTION.

Mercuric chlorid. .Saturated solution
Hydrochloric acid
3 drops to each ounce

LEAD BLEACHING SOLUTION.

Lead nitrate ½ ounce
Potassium ferricyanid.... ¾ ounce
Water12 ounces

Dissolve thoroughly and then filter.

Various pleasing shades of red and brown can be secured on prints developed with amidol, ferrous oxalate and rodinal by using the following

methods after bleaching in either of the bleaching solutions:

Immersion in a solution of

Potassium bichromate 1 ounce
Ammonia 1 ounce
Water 10 ounces

produces a dark brown with a mercury bleached print, and a reddish yellow with the lead bleached print.

Immersion in

Sodium carbonate 1 ounce
Water 10 ounces

tones a red-brown.

A solution of

Sodium sulphite 1 ounce
Water 10 ounces

renders a dark brown.

A bath of

Silver nitrate 400 grains
Water 10 ounces
Ammonia 4 drams

gives a peculiar brown tone.

Immersion in a solution of

Copper sulphate 1 ounce
Water 10 ounces

will give a pleasing red, and this method may be used with fine results on prints developed with edinol as well as the other agents already mentioned. All of the copper processes seem to tone edinol developed prints very well indeed.

A bath of

Neutral chromate of potash 1 ounce
Water 10 ounces

produces yellow tones, which can be changed to different colors as follows:

Brown, by treating the yellow print with

Pernanganate of potash... 1 ounce
Water 10 ounces

Red-brown by immersion in

Uranium nitrate 1 ounce
Ammonium chlorid 1 ounce
Water 10 ounces

Copper-red by treating with

Cupric chlorid 1 ounce
Water 10 ounces

Prints may be toned to a Bartolozzi red in the following manner:

Bleach in

Potassium bichromate 20 grains
Hydrochloric acid 2 drams
Water 10 ounces

Wash thoroughly and then tone in the following:

Sodium thio-antimoniate... 150 grains
Water 10 ounces

Uranium nitrate is a much used and very satisfactory toning agent which gives a broad field for experiment and a wide range of tones from warm browns through the sepias, browns and red-browns to reds. Nearly every writer of things photographic advances a slightly different formula in making use of this toning method, but they are all shoots from the same root, and a little observation will show that they are all practically the same. Very nearly equal parts of uranium nitrate and potassium ferricyanid are dissolved in strongly acidulated water. By changing the strength of the solutions, or the proportions of each or adding this or that to the bath the experimenter is made happy. A formula which I consider very good is as follows:

SOLUTION A.

Water 5½ ounces
Uranium nitrate 1 ounce

This solution will keep well only in a well corked *brown* bottle protected from the light.

SOLUTION B.

Water 5½ ounces
Potassium ferricyanid 1 ounce

This solution does not keep well and should be freshly made each time it is wanted.

To tone take: Water, 6 ounces; solution B, 2 drams; glacial acetic acid, 1 dram; solution A, 2 drams.

Soak the print in water until it is limp. Then place it in a clean tray and flow the toning solution over it. The change will begin in less than a minute and the various tones are quickly reached in the order given above. With the formula given the red tones will be reached in five minutes. When the desired tone is secured immerse the print in water which has been made acid by the addition of a few drops of acetic acid to check the toning. Then wash in running water until the yellow stain produced by the potassium ferricyanid

is removed, when the print may be dried in the usual manner. The washing should not be continued for longer than ten minutes, as it will injure the tone. With this process prints on rough paper produce the best results, especially if they have a good gradation of tones without any very dark shadows. Prints made especially for toning with this process should be properly exposed but slightly under-developed. I have found that prints developed with edinol give the best results with this method of toning, although ferrous oxalate and hydroquinon both give good red-brown tones.

The edinol formula which I have used with great success is as follows:

EDINOL DEVELOPER.

No. 1.

Water 14 ounces
Edinol 60 grains
Acetone sulphite 300 grains

No. 2.

Water 14 ounces
Sodium carbonate (des.)... 450 grains

To develop: Take one part of No. 1, one part of No. 2, and one part of water, adding about one drop of a ten per cent solution of potassium bromid to each three ounces of developer.

A good oxalate developer which may be relied upon for this work may be prepared as follows:

OXALATE DEVELOPER.

No. 1.

Hot water 48 ounces
Potassium oxalate 16 ounces
Citric acid 1½ ounces

No. 2

Hot water 16 ounces
Proto-sulphate of iron... 8 ounces
Citric acid ⅔ ounce

No. 3

Water 4 ounces
Potassium bromid 55 grains

The three solutions should be kept separate and mixed only for immediate use when cold. To develop: Take three ounces of No. 1, one-half ounce of No. 2, and fifteen minims of No. 3.

Upon removing a print from this developer it will be found beneficial to

rinse it for about three minutes in the following clearing solution. This is done to prevent the precipitation of iron from the developer into the fiber of the paper. The print should then be rinsed in water and fixed in the usual way.

CLEARING BATH.

Water 16 ounces
Citric acid ⅛ ounce

A simple ferrous oxalate formula which gives fine velvety blacks especially desirable for prints that are not to be toned may be prepared as follows:

FERROUS OXALATE DEVELOPER.

No. 1

Water 24 ounces
Potassium oxalate 6 ounces

No. 2

Water 6 ounces
Ferrous sulphate 2 ounces
Citric acid (1 per cent solution) 2 ounces

To develop: Take three ounces of No. 1, one ounce of No. 2, and if softer prints are desired, use more of No. 1.

Perhaps the most common method of producing green and blue tones is by the use of perchlorid of iron. Prints which have already been toned red or brown with uranium nitrate are immersed in a solution containing from one-tenth to one grain of iron perchlorid per ounce of water. By varying the strength of the solution as just indicated and stopping the uranium toning at various stages, many different shades of green and blue may be secured and a wide range is given the experimenter. The iron solution, which should immediately follow the uranium bath, first changes the reddish tones to green, then to blue-green and finally to blue.

For green tones I know of no better formula than a combination of iron perchlorid and vanadium chlorid. This method also offers opportunities for experiment, as the iron produces blue and the vanadium produces yellow and a mixture of the two in the right proportions will give almost any shade of green desired.

Bleach the black and white print in:

Water 20 ounces
Potassium ferricyanid 1 ounce



Negative by J. H. Berkemann,

Perry, Iowa.

Rinse and immerse in the following until the desired tone is reached.

Iron perchlorid	18 grains
Vanadium chlorid	15 grains
Ammonium chlorid	36 grains
Hydrochloric acid (C.P.)...	40 drops
Water	8 ounces

A slightly different green may be produced on the yellow toned prints already spoken of in this article. These should be immersed in:

Water	10 ounces
Ferric chlorid	1 ounce

A beautiful blue tone may be secured by placing the black-and-white prints in the following solution without previous bleaching:

Ferric ammonium citrate (brown salt) saturated solution	1 dram
Potassium ferricyanid (saturated solution)	1 dram
Hydrochloric acid	2 drams
Water	5 ounces

Prints rapidly become a dark blue in this bath and finally change to a rich prussian blue. Thorough washing is necessary as soon as the desired tone is

reached in order to clear the whites. More water in the above formula will give a darker blue.

For toning with the combined uranium and iron process as well as other processes giving blue and green tones I have found that prints developed with amidol produce the best results. Rodinal also gives good tones and hydroquinon gives fairly good greens and very satisfactory blues.

The hydroquinon developer which I have used is as follows:

HYDROQUINON DEVELOPER.

Hydroquinon	¼ ounce
Sodium sulphite	1½ ounces
Potassium metabisulphite.	¼ ounce
Potassium carbonate	1 ounce
Water	32 ounces

The rodinal developer may be prepared in the following manner:

RODINAL DEVELOPER.

Water	20 ounces
Rodinal	¼ ounce
Potassium bromid (10 per cent solution)	3 drops

PHIL M. RILEY.

CONFERENCE OF PHOTOGRAPHIC DEALERS.

An event unique in the photographic world took place in Rochester, New York, February 20-22 inclusive, when on the invitation of the Bausch & Lomb Optical Company, seventy-five photographic dealers, guests of the company, gathered together from all parts of the country for the purpose of considering matters of mutual interest and advantage.

Conferences of this kind are not unknown, perhaps, in other lines of business, but this was, so far as we know, the first for the photographic trade, and the credit for its inception and carrying to a successful conclusion belongs to the Bausch & Lomb Optical Company.

About the middle of January a circular letter was sent out to the leading photographic dealers in the country to ascertain their views regarding the advisability of holding a conference for the purpose, as was therein stated, of giving them an opportunity to gain information otherwise impossible to acquire; of observing the processes involved in the manufacture of the various photographic products manufactured by the company; of studying the different types of lenses and their adaptation to various purposes; of discussing topics of interest under conditions both helpful and stimulating; and lastly, that the social intercourse might be a means of engendering good will that might prove productive of good results.

So hearty was the response that arrangements were immediately perfected for holding the meeting February 20-22—this date being the choice of the majority of those who had signified their intention to attend.

One of the rooms in the large three-story addition now nearing completion was fitted up as a convention hall, a platform, palms, and the prize competition pictures on the walls giving it quite a festive appearance. There at 10:30 A. M. February 20 the visiting dealers were welcomed by Mr. Edward Bausch, who, in closing, extended to them an invitation from Mr. George

Eastman, of the Eastman Kodak Company to remain a day longer as his guests. They were then presented to Mr. J. J. Bausch, the senior member of the firm, and an informal reception followed, which gave opportunity to exchange greetings and become acquainted.

The afternoon was spent in visiting the factory and learning something about the processes of manufacture of lenses and shutters: later upon invitation of the Bartholomay Brewing Company, the dealers adjourned to the brewery, where, after inspecting the plant, lunch was served and the 1905 spring "Bock" was sampled and pronounced to be of excellent brew.

In the evening the visitors divided into groups and were escorted to club or theater by representatives and friends of the company.

The formal sessions of the conference began on Tuesday morning. Mr. S. Lawrence, the expert demonstrator for the Bausch & Lomb Optical Co., gave the first of a series of addresses on the "Nature and Use of Photographic Lenses," illustrated with lantern views. Mr. Lawrence's subject covered numerous topics of great interest to the dealer, each of which was carefully and thoroughly discussed by him. The entire morning and part of the afternoon session were devoted to a consideration of "The Properties of Light and of the Optical Glass Used in Lens Construction."

Mr. J. Hammele, following Mr. Lawrence, described the Anastigmat and the B. & L. Portrait Lenses, pointing out the characteristic features of the various types.

Questions and discussion at the close of each address resulted in elucidating points and clearing away difficulties, besides affording opportunity for a helpful exchange of opinions and experiences.

One hundred sat down to a banquet in the Powers hotel Tuesday evening,—the visiting dealers, members of the Bausch & Lomb Optical Company, their salesmen and heads of departments, and representatives of local companies

as follows: Messrs. J. S. Cummings, F. S. Noble and W. G. Stuber, of the Eastman Kodak Company; Messrs. G. E. Mosher, J. M. Walmsley and G. J. McLaughlin, of the Century Camera Company; Messrs. C. F. Ames and J. A. Robertson, of the Rochester Optical Company; Mr. F. W. Barnes, of the Blair Camera Company; Mr. L. B. Elliott, formerly with Bausch & Lomb. It was the intention of Bausch &

gratification and appreciation at the presence of so large a number at the first conference of photographic dealers. One after another was then held up for a speech until there had responded Mr. Morris Earle, Mr. J. S. Cummings, Mr. J. M. Walmsley, Mr. H. Q. Sargent, Cleveland; Mr. W. E. Duncan, New York; Mr. W. A. Lyon, Toronto; Mr. I. A. Savage, Syracuse; Mr. S. Lawrence; Mr. F. A. Mulhaupt, Kansas



CONFERENCE OF DEALERS IN BAUSCH & LOMB ASSEMBLY HALL.

Lomb to have this a purely informal affair so that each and every one of the guests might be free from all thought of speeches and enjoy himself to the utmost, but speeches, it appeared, was what they wanted.

After Mr. Morris Earle, of Williams, Brown & Earle, of Philadelphia, had entertained them by singing "A Warrior Bold," Mr. J. J. Bausch, the senior member of the firm, was called on. He responded by relating reminiscences of early days, and was followed by Mr. Edward Bausch, and then Mr. William Drescher, both of whom expressed their

City; Mr. Charles R. Pancoast, Philadelphia; Mr. J. W. Collinson, Boston; Mr. A. C. Wilmerding, New York; Mr. L. M. Kaiser, San Francisco; Mr. E. S. Goodhart, Atlanta; Mr. L. M. Prince, Cincinnati.

It was a late hour which marked the termination of speeches and stories and songs and confidences begot of the time and occasion, and it was a right jolly crowd that finally dispersed.

But it was not a tired crowd that gathered again Wednesday morning, for enthusiasm and interest were keenly alive.

Mr. W. V. Moore spoke first, "From the Purely Commercial Standpoint," pointing out the qualities essential for successful salesmanship.

Mr. Lawrence then took the floor explaining:

Why an Anastigmat costs three to five times as much as an ordinary lens.

What the photographer gets in return for his extra outlay.

In the discussion that followed, Mr. Earle, of Philadelphia, asked whether it might not be possible for manufacturers to coöperate and find ways and means of adjusting flanges whereby they will be more convenient than they now are.

Mr. Edward Bausch answered by stating that the present standards had been formulated by the Photographic Society of Great Britain and were generally adopted by manufacturers in 1890, but while they designated dimensions, they did not supply suitable gauges, the result being the present unsatisfactory conditions of which all manufacturers and dealers, as well as their patrons, complain. He believed that concerted action on the part of the various societies, dealers and manufacturers might be able to bring about the needed reform.

Mr. Pancoast called attention to a movement that was instituted in Philadelphia about ten years ago, to standardize the sizes and sensitiveness of plates and efforts to adopt a standard for flanges, which were unsuccessful. One difficulty with flanges was the fact that the Whitworth form of thread with rounded corners was the standard in England, whereas the American standard was that of the Franklin Institute with full thread, and a flange made according to English standard would not receive the American standard screw made under the same dimensions.

The afternoon session was opened by Mr. L. B. Elliott, who gave a very interesting account of "How Advertising Helps the Dealer."

Mr. William L. Patterson next discussed "Projection Apparatus and Eromid Enlargements."

The remainder of the session was

devoted by Mr. Lawrence to a consideration of the "Qualities of Different Lenses for Certain Work," "The Value of Longer Focus Lenses for Pictorial Photography," "The Influence of Focal Length on Perspective and the Importance of Considering Focal Length in the Choice of a Lens."

In concluding Mr. Lawrence thanked his audience for the attention with which they had listened to his numerous talks and hoped he had been able to help them a little, at least. He was obliged to respond to an enthusiastic recall and again expressed his thanks for their hearty appreciation of his efforts to make clear the points that had troubled them.

Mr. Edward Bausch now read to the dealers an invitation from Taylor Brothers Company, thermometer works, to visit their factory on Friday, February 24, and called attention to a program for the following day which had been prepared and sent by Mr. George Eastman, whose invitation for Thursday they had accepted, and added: "In closing I wish to say that the fear we had at the outset is intensified. As the time has gone on we have more fully appreciated that the task we set for ourselves was a large one, and I am afraid we have fallen short — that there were many things we could have done to make your stay more interesting. We wish to express our hearty thanks and appreciation for the sacrifices you have made in accepting our invitation. There are many dealers, as I stated at our first session, who have been unable to come, but who have been in hearty accord with this movement. What will develop from this initial meeting I cannot now say, but it would certainly be gratifying and beneficial if we could again bring about such a notable gathering as this."

Scarcely had Mr. Bausch finished when Mr. Morris Earle arose and said:

"I want to say a word to you personally, please, Mr. Edward Bausch. I have been given the power of attorney here to speak for my friends — the dealers — and I want to say, first, that my heart is so full of the good expressions

that have been handed to me to be transmitted to you that I could talk for hours almost and I could not express all the good and kindly thoughts that have been spoken, but they are all wrapped up in the very friendly greeting that we want to leave with you in the form of this loving cup as an expression of those heartfelt thanks and kindly interests that we feel in you as

he stands for all integrity, honesty and honor that is in the photographic world. I have known Mr. Edward Bausch for over twenty years. It was said here that he put aside the college cap and gown and donned the jumper and stood at the bench. It was there that I first saw him in his work.

"The men that have represented him here in these three days have been his



LOVING CUP PRESENTED TO MR. ED. BAUSCH.

your associates, and this we give with the heartiest of good will.

"There are three handles to this loving cup, which mean much in the use of it. The good will of the man who is next to you is transmitted to you by one handle as you take hold of the other two, and in this 'Round Robin' you will feel the expression that exists here.

"I want to say that Mr. Bausch, and I am sure I voice the feeling of all of you dealers and associates, when I say that

spokesmen, have been under his guidance, as we can all see. He has been called the 'Prince of Rochester,' but I give him another new name; he is 'The Prince of the American Photographic Public.'

"His interest in us, as has been shown by his warm hospitality and his enjoyment, has been shining in his face clearly. His pleasure, if I judge the man rightly, has been equally as great as ours. It could not be as great as ours because we have more hearts than

he has, but he has brought us together and warmed our hearts with his kindness. He is a conqueror in photography as he has been in microscopy. In the latter science he has conquered most of the problems. This wonderful establishment is due much to him and to his selection of men who have helped him.

"As we leave Rochester and return to our homes, I am sure I voice every man here when I say that we go back with our hearts full of appreciation of this unusual thought which brought us together, and this thought proves Mr. Edward Bausch to be the 'Tenth Man' that we spoke of this morning. Many of the problems he has conquered have given him the power to go on to further conquests, and I feel sure that the problems now are in good hands with him at the head.

"Let us join hands in a circle and drink his health in this cup as one of the best of good fellows. This cup bears this inscription:

"'In appreciation of the events of February 20, 21, 22, 1905.'

"There is a motto on it. It says: '*Ecce, quam bonum, quamque jugendum, Habitare fratres in unum,*' which being interpreted reads as in the 133d Psalm, 'Lo, how good and blessed it is for brethren to dwell together in unity.'

"On the third panel the inscription reads: 'For Edward Bausch from His Friends, the Dealers.'

"The manufacturer can do but part of the work that must be done in handling a product from the raw state to the consumer; he can not do it alone. Mr. Bausch has realized this and he knows our power and our power is great. It is said that three people in the handling of a product are very necessary—one the inventor, another the manufacturer, and the third the salesman. Sometimes it is difficult to know which is the most important, which is the most powerful. We give all honor to the inventor. The citizens of America and of all parts of the world where there are patent laws on the subject are protected in their work. The manufacturer, however, has a greater work to do, for he must produce the

article in a manner to attract the public. If he is successful in his work still he is dependent upon the third link in the chain—the salesman. Now we stand as the salesman, and it is our duty to make this chain a complete one.

"I made you a promise last night at the dinner which I propose to fulfil, and if you gentlemen will rise and fall back to the edges of the room and form a circle I will sing the motto inscribed upon the cup."

A circle was formed entirely around the large room, Mr. Bausch and Mr. Earle inside, and after Mr. Earle in a magnificent baritone voice had intoned the Latin motto, the cup was filled and refilled as it passed from Mr. Earle to Mr. Bausch and then around the circle.

Mr. Bausch, in accepting the cup, said:

"I feel that you have made a mistake in selecting me as the recipient of your kindness. I accept this cup in a broader sense—that I am to receive and be custodian for my father, his old partner, my brothers, and brothers-in-law, and help in general. I can not express to you the thanks I feel so deeply, and it is impossible for me to say what I would like. I feel it and I hope that you think I do, and am sure you do. This will always be to me and the other members of our family, I am sure, a memento of kindness on your part and a bright incident in the history of our business. We will always hold it in high esteem. We will always hold you all in high esteem. We shall never forget this event. We never can."

Mr. Earle then called on Mr. Sargent, of Cleveland, whom he referred to as one of the "Old Guard," who said:

"I want to express our deep appreciation of the kindly treatment which we have received at the hands of this firm and all those who are connected with it in any way. I am sure that our hearts are rather filled with regret that the time has come that we must separate and go home: that will be the only thing that we can regret. The time has passed so quickly when we must shake hands and say good-bye, but we take with us a pleasant memory, and

shall hold in highest esteem all the members who are connected with this institution. There is one little thing which I regret, and that is that in conducting

every other respect our entertainment was perfect absolutely. We shall go away from here with the pleasantest memory of this occasion.



J. H. Field,

FIRST PRIZE.

Berlin, Wis.

Last Month's Portrait Competition.

us through the factory we were hurried through the departments in which the ladies were at work. For some reason or other those who had it in charge said we would have to hurry along. In

All now joined in singing "Auld Lang Syne," and amidst hearty expressions of mutual good will the First Conference of Photographic Dealers came to a close.

QUARTER-CENTENNIAL CONVENTION OF THE PHOTOGRAPHERS' ASSO- CIATION OF AMERICA.

If you attended the World's Fair convention, you surely wore one of those "Meet Me in Boston, 1905," checks. Now we will ask you to check yourself through to Boston, where we will have the greatest convention of all, celebrating the Quarter-centennial of our Association.

I want to see the grandest display of portrait photography in our history, and you can help to make this exhibit the success it is going to be.

Don't say that I am beginning on you too soon. It is never too early.

The more thought you put into your work the more will this thought be evident in your work, and *you* will be the one to profit by it.

I can assure you the best treatment of your life at the hands of the New England photographers, as they know how to entertain their guests.

I speak from experience, as I spent two very pleasant weeks with them, and attended their convention in 1902, and had such a delightful and profitable time that I want all my Western friends to attend the Boston convention and share the pleasures and credit of the best meeting for years.

It is the intention of the Executive Committee to make this convention the "banner convention" and want you to participate in the good things that have been planned for you.

We are offering \$800 in gold as prizes to be competed for by those who wish to enter for something substantial. For those who do not care to compete in this class, there will be complimentary exhibits.

All work that, in the opinion of the judges, reaches a sufficiently high standard of excellence will be awarded a certificate of merit, worthy to grace the walls of any studio. These certificates are not to be awarded to those receiving cash prizes, as the latter will be evidence of the excellence reached by those receiving them.

Exhibitors will enter work in one class only. An exhibitor entering in a

competitive class will not enter in the other, or in the complimentary class. Any one entering in the complimentary class will not enter in either of the competitive classes. This ruling is made with a view to ascertaining the wishes of our membership in regard to the conducting of our conventions.

The convention will be held in the Mechanics building, one of the best appointed buildings we have had for years, and the Lenox Hotel has been selected for official headquarters, and is only about four blocks from the convention hall.

While in Boston you will have an opportunity to visit their numerous art institutions, the Boston Museum of Art being one of the best in the country, and can be given a full day of your time with great profit.

A great many places of historic interest are found in and around Boston, and may be visited while on the convention trip this year.

Some of the best appointed studios in the country are located in Boston, and the Boston photographers are always courteous, and will be pleased to have you call on them.

The Entertainment Committee will plan an afternoon at one of the beaches, and you may have the pleasure of an old-fashioned shore dinner.

The visiting ladies will be well taken care of by the following ladies' committee: Mrs. H. A. Collins, Mrs. F. R. Barrows, Mrs. Ben. Krieger, Mrs. Geo. M. Bolton, Mrs. Ed. Packard and Miss N. J. Hall.

But the best of all will be the convention. We will have a program that will be interesting, instructive and that will do us all good.

Now get busy and make the work. Send your exhibits to Boston; compare work with that of others and see which excels, and why it does so, and if the other exhibitor's work is best, go home and try again, and come with better work next year. Be sure and send your work to the convention: you can not make comparisons with that of others by leaving yours at home.

And don't wait till you reach Bos-

ton before paying your dues. You can easily guess what that will mean—a long wait in the line at the Treasurer's window (a line that will be longer this

If not a member, and you wish to join the association this year, send \$3 membership fee and \$2 dues for this year.

For further information in regard to



Negative by E. E. Godfrey,

Waukegan, Ill.

year than usual, as there will be so many new members to enter on the books); therefore send your money *now* to F. R. Barrows, 1873 Dorchester avenue, Boston, Massachusetts. If already a member, send your annual dues.

the convention, address any member of the Executive Committee.

Fraternally yours,

C. J. VAN DEVENTER,
First vice-president,
Decatur, Illinois.

CHARLES S. ABBOTT.

All photographers who have been in the habit of attending conventions will hear with regret of the death of Mr. Abbott, president of the American Aristotype Company, which occurred on March 1 in North Carolina, where he had gone for his health.

The whole photographic world knows of his business success, and it is therefore unnecessary to say one word of it here. He was strenuous in all that he undertook, though to an outsider he may have looked as if he was thinking of anything but his business affairs. He was geniality itself, could fight tenaciously for his point of view, but would just as readily consider that of the other fellow. I have good reason to know this, because the first time we ever met I took decided exception to the use to which was put the money his company subscribed for the entertainment of photographers at conventions. It was at the time when there was keen rivalry among paper manufacturers for the professionals' business, and Mr. Abbott was out for all he could get. When I expressed my opinion he immediately wanted to know what I would propose as a substitute, as he was willing to spend the money in the way the majority of photographers preferred. I suggested education. The idea seemed good to him, and from that time on he devoted much of his energy toward that very laudable end, with the excellent results that every one knows. I am in a position to state, because we talked the subject over together on different occasions, that while he aided in educational matters as much as he felt he dared, he did not aid nearly as much as he desired, feeling that there was great possibility of educating the photographer beyond the taste of his customers.

His independent way of fighting the game — for to him business was a game — is best shown by the fact that never once did he ask this journal to say one word about his company or his products, and I think all other journals could tell the same story. I have frequently heard his keenest opponents

discuss him, and all agree that he lived up strictly to the rules; in fact, but a few months ago one of them remarked to me that Mr. Abbott deserved everything he had got, as his company had come nearer solving the tantalizing and maddening problem of making uniformly a collodion silver paper than any other had done.

Mr. Abbott lived a strenuous life in a genial, whole-souled way, and I am certain there are no more sincere mourners over his early death than the men who contended the most firmly with him in the business world.

F. DUNDAS TODD.

COLORPRINTE.

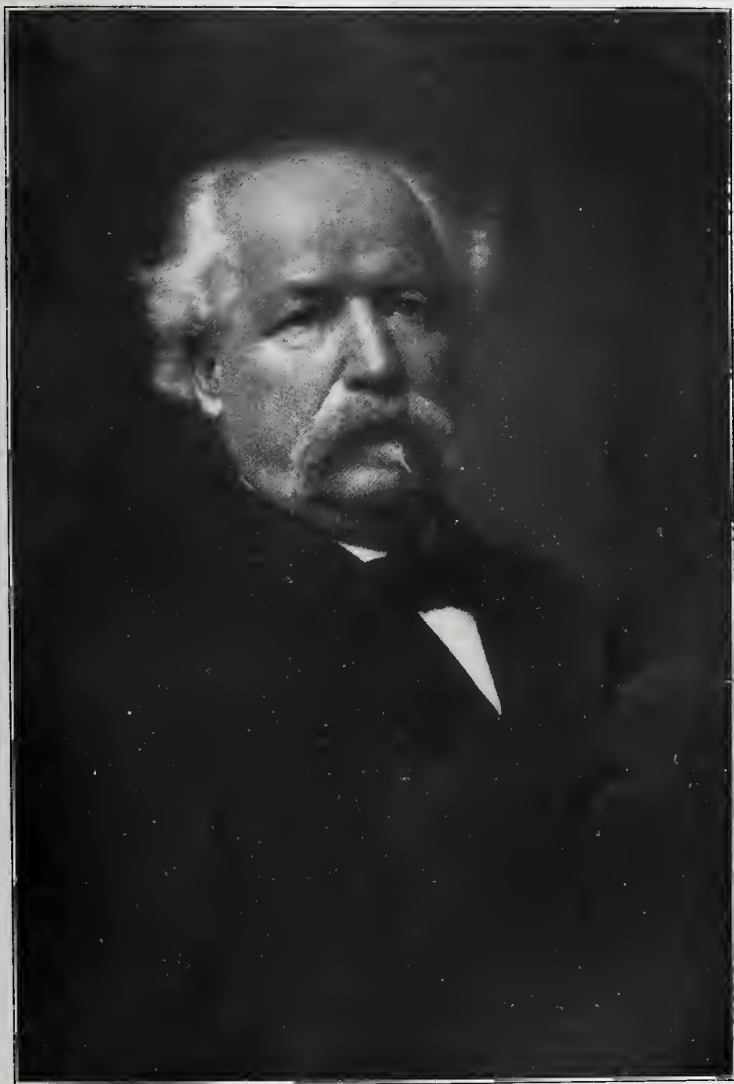
This is a paper for making photographic prints in the colors of nature from ordinary landscape negatives.

Colorprunte is the invention of Dr. von Slavick, an Austrian army officer, and perfected by Dr. Adolf Heseckiel. It consists of a paper coated with successive layers of colors in the order of the usual relative density of those colors on the negative. When printed, that portion of the coated pigment which has not been acted on by the light is washed away in warm water, which completes the printing process. The theory is that light transmitted by the negative reaches through the sensitized layers of pigment to the color representing the original color of the subject. In the high lights, such as the sky, the negative being dense, only such light will pass through as will reach the first coating, which is light blue. On the contrary, in the darker portions, such as foliage, those portions of the negative being more transparent, the light reaches through the successive layers to the green, which is next to the last coating.

As will be seen, the working of the paper is of the utmost simplicity. In the form in which it is being placed on the market it consists of an ordinary looking piece of pigment paper, which is sensitized by being placed for three minutes in an ordinary two and one-half per cent bichromate bath, or, pref-

erably, in the sensitizing solution which is furnished by the manufacturers in concentrated form. It is then squeezed to a ferrotype plate and placed in

be handled with impunity in ordinary subdued light. As there is no perceptible change during printing, this is best accomplished by exposing a small strip



E. E. Godfrey,

SECOND PRIZE.

Waukegan, Ill.

Last Month's Portrait Competition.

a dark place to dry. If this sensitizing is done in the evening the paper will be dry and ready for use the following morning. When dry it is sensitive to light in about the same proportion as ordinary gelatin paper, so that it can

of gelatin paper on one edge of the negative alongside of the Colorprint. When the gelatin paper has printed to the depth usually required for a good proof, the printing is complete. The Colorprint is then placed in a tray of

cold water, allowed to soak for a moment and a piece of transfer paper (which is furnished with the Colorprint in each package) placed under it and both removed from the water and squeegeed together. It is left for a few minutes and is then placed in warm water—about 95° —though a thermometer is unnecessary because a difference of several degrees will make no difference in the print. In a few moments some of the red protective coating will be seen to ooze out between the Colorprint and the transfer. The original paper of the Colorprint can soon be removed and the print will have the appearance of a mass of dark red. It is then turned face down in the warm water, and that portion of the pigment which is not affected by the light will dissolve and fall to the bottom of the tray. It can be turned face up and examined from time to time to ascertain when development is complete. Development usually takes about five minutes, though it can be hastened by slightly warmer or retarded by colder water. There is great latitude of exposure, as, if underexposed, colder water may be used, and warmer if overexposed. As development progresses, the operator will be pleasantly surprised by the appearance of one color after another as the warm water reaches to and dissolves the unexposed pigment above each color. When development is completed, the print is thrown into cold water or a weak alum solution to stop further development, and is then mounted or hung up to dry, to be mounted later.

The process, it will be noted, is similar to the carbon process, but is much simpler in many ways. No "safe edge" on the negative or paper is necessary. In development, no manipulation is needed, the best results being secured by allowing the print to remain face down in the water until development is finished. Local development is unnecessary and harmful, except, possibly, to work clouds in the sky just before development is completed.

No special negatives are required, but good, ordinary, contrasty negatives will

give a correct interpretation of the original colors of the view. The Colorprint now being placed on the market is for general landscape negatives. Owing to the fact that many of the shades of red and green photograph with practically the same density on the negative, special paper for portrait work is required, which it is hoped will be on the market in the near future.

THE PREVENTION OF EXAGGERATED DENSITY.

Every photographer has had more or less experience of exaggerated density both in negatives and prints on developing paper, especially when the subject happened to be a contrasty one, the typical examples of which are an interior with a window in the field of the lens, and a landscape with part of the subject in very deep shadow and other parts in high light. An English experimentalist has been investigating how to avoid this chocking up of the high lights in the negative and finds that by use of the following solution he can secure sunsets and brilliantly lighted cloud effects on the same plate without color screens:

Copper sulphate	5 grains
Potassium persulphate.....	10 grains
Nitric acid	10 minims
Water	4 ounces

The exposed plate before development is bathed in the above solution for about one minute, is rinsed after immersion and then developed in the ordinary way.

Gaslight papers he recommends should have a weaker solution.

Copper sulphate	1 grain
Potassium persulphate	2 grains
Nitric acid	5 minims
Water	4 ounces

As with plates immerse the exposed but undeveloped prints in the solution for one minute, rinse and then develop. The illustrations that accompany the article show that the process is certainly an effective one in the writer's hands.

PHOTOGRAPHIC ETCHINGS.

At the North Middlesex Photographic Society the other evening some photographs were passed around for inspection which had been made from negatives entirely hand-worked. The subjects were drawn in line, or "etched" on glass coated with an opaque ground. The method is an old one, and the excellence of the results depends almost entirely upon the artistic skill of the worker. These particular examples were not only very clever in this respect, but were interesting from the nature of the ground employed.

After a great many trials, the demonstrator said that he had found the best of all was one composed of good Indian ink—the solid variety—ground up to a fine cream with water, and applied in a thin layer with a brush. If it were put on too thickly it chipped off, and if too thinly it was not opaque. When the coating has become quite dry and hard, the design may be transferred to it by the use of "red carbon paper," first tracing from the original, and then putting the "carbon paper" between the tracing and the blackened glass. The outlines are then gone over with a stylus, and the design appears in red on the black ground. If this can not be done on account of the difference in size between the original and the copy, then it is best to fix a mirror so that the original can be seen reversed in it, as the design must be reversed on the glass. The actual etching is done with an etcher's needle, and for a good deal of the work ordinary sewing needles fitted into handles suffice. When the negative is once made, it may be printed by any photographic process, though gaslight papers are the most convenient of all in this weather. It is a very attractive method in skilled hands for Christmas card and similar purposes.

Another member who was present said he had worked in a similar way, using glass coated with Brunswick black thinned down with fatty oil of turpentine, and another had employed a solution of the asphalt or bitumen used for paving purposes, in turpentine; but neither of these compounds will be

found as satisfactory as the Indian ink. Of course, the photographic connection of the process is a very slight one.

A NOTE ON INTENSIFICATION.

We have so many intensifiers nowadays that one can not wonder at amateurs getting muddled. I used to be "intensifier mad," and think I have tried every formula put forward both by experts and professional formula cooks.

My favorite method, and one that I want to call attention to, is that recommended many years ago by Mr. J. B. B. Wellington, for it has many advantages over some of the later comers.

For instance, intensification can be carried out immediately after fixing, a preliminary rinse under the tap for a couple of minutes being all the preparation required, instead of the usual necessity for totally removing the hypo. A mere ghost of an image can be built up to any extent at one operation, intensification going steadily on without interruption, and the resulting image is composed of silver, having the appearance of a properly developed negative.

A stock solution must first be prepared as follows:

Silver nitrate	100 grains
Distilled water	2 ounces

When dissolved, add

Ammonium sulphocyanid. .	.240 grains
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This will form a precipitate which will become dissolved. The solution must now be diluted to 10 ounces with distilled water, when another precipitate will be thrown out. To this solution add a saturated solution of hypo sufficient to dissolve the precipitate; this forms the stock solution.

To intensify, take:

Stock solution	1 ounce
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And add:

Pyro	3 grains
Sodium sulphite	12 grains
Ammonia	6 minims
Ammonium bromid	2 grains

Immerse the negative and rock the solution until the necessary degree of

intensification is acquired, from five to ten minutes usually being sufficient to produce a dense negative from a very thin one without the slightest staining.

More ammonia may be added from time to time if the action is not sufficiently energetic. After treatment the negative must be well washed.

C. S. W.

MATT SURFACE ON P.O.P. PRINTS.

The matt surface which is obtained by using matt P. O. P. is one thing, but a matt of quite a different character can be obtained by squeegeeing the wet print on to matt celluloid. The following particulars of the method were given recently by a writer in the *Ilford Photographic Scraps*: The prints should be squeegeed down on the matt celluloid while wet, and should on no account be dried first, as the surface might be matted in patches only. They are not liable to slip about, as in the case of enameling. The surface of the celluloid should, of course, be first well cleaned, but requires no further preparation. We must see particularly that no grit or dust falls on it before putting down the prints. A little speck of grit keeps the print from the surface, resulting in a surrounding glossy spot. It is obvious that a glossy spot on a matt print is more visible than the same glossy spot on an enameled print. The prints must be left to dry thoroughly before stripping. The resulting surface, when stripped from the matt celluloid, is perfectly matt, extremely fine and smooth. It is especially suitable for light photographs—portraits without deep shadows. The high lights show with extreme delicacy, and the softest shade is visible.

EDITORIAL TABLE.

FROM the publishers, the Rotograph Company, 771-773 East One Hundred and Sixty-fourth street, New York, we have received the first number of the fifth volume of the *Photo Critic*, which concerns itself particularly with bromid and carbon printing. It contains very practical articles on the making

of enlargements, enlarged negatives, toning of bromids and carbon work. Sample copy will be sent on request.

BURKE & JAMES, of Chicago and New York, have now had two Ray Filter Competitions, both of which were very satisfactory and successful, and they have therefore decided to have another one this year. Heretofore they have always given away apparatus as prizes, but this year it is their intention to give cash prizes amounting to \$100. In 1902, their last Ray Filter competition, they gave sixteen prizes, but this year they have not yet fully decided how many prizes will be given or the amounts. We can say, however, that all camera users will be eligible to take part in this competition and that all pictures, either landscape or flowers, will be admitted. The principal conditions are that the pictures must be made through one of Burke & James ray filters, either the "Ideal" or "Isochrom." These ray filters are for sale by all photographic dealers in the United States.

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FIRST PRIZE.

Buffalo, N. Y.

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MINOR CONVENTIONS.

In a recent article I pointed out that the tendency among all classes of business men and workers was emphatically in the direction of coöperation. This is in obedience to the operation of a natural law, because every living thing, nay, every inorganic compound, is the product of coöperation. It takes two to make a third. The photographic bromid of silver is the result of the union of the gas bromine with the metal silver, and so on throughout the universe. Competition among individuals in the human family is largely an artificial product and is an excellent thing, not for those who compete, but for those who are coöperating, who thus are enabled to buy in a cheap market and sell in a dear one.

I have said that economic competition is largely an artificial product and a study of history shows it resulted from the laws passed by non-competing rulers, ordinarily the big land owners. The moment such laws were repealed human beings at once reverted to their natural instincts to coöperate, formed partnerships, companies, trusts, labor unions and all such combinations, the fundamental principle of all of them being the elimination of competition. The first development naturally occurred among industries whose character demanded the close association of those

interested, as for instance, among shop and factory workers; the latest will be among those who are scattered, as farmers and photographers.

Years ago the agriculturalists organized the grange; to-day they are co-operating in the creamery, cheese, fruit and elevator business. The photographer has had his coöperative instincts aroused, but wanders around aimlessly looking for some means of expressing it. He organized combinations mainly to have a good time; then he advanced to the more utilitarian stage of trying to make them educational. Now he feels there is something lacking and is seemingly preparing for the next step, which is to make them economic — that is, to coöperate with his fellow photographer on the dollar plane, which is after all the fundamental one.

To me the most interesting sign of the times is not the big convention — the one that is exploited in the press — but the little one that is known to only a few. Years ago a number of financially successful photographers, feeling the need of mutual aid, agreed to meet together every few months to discuss the details of their business, and by rubbing against each other get new ideas. These eight or ten, located thousands of miles apart, have found that it pays them to meet in convention at least quarterly and devote two whole days to serious

work. Each one brings along perhaps a score of his most recent photographs and these are discussed in the most straightforward manner. There is no pretense of jollyng, but each man in his turn speaks right out what he thinks of each print, considering it from a technical, pictorial and business standpoint.

Much time is devoted to the money end of the business, as each one is fully alert to the fact that he is above all things in business for profit, not fun. To illustrate this point, let me here state that on one occasion I asked a few members of the circle if they did not feel they ought to do something to help along the less successful members of the fraternity, and the answer I got was they would simply be delighted to do so whenever photographers realized above all things they were in business for money, but that years ago they realized it was a case of wasting time and effort trying to help men who were willing to sell their best product at a poor price. I had to admit the conditions were much as pictured. There is the critical point. The successful man is the one who by dint of advertising, using this term in the broadest sense, brings into his business premises more customers than would ordinarily find their way there. Like all other business men, photographers have to plan and execute business campaigns, schemes as they are generally called, and the most successful photographers are those who have the most perfect scheme. To schemes, as such, one can not take exception, as they are an essential feature of present-day business methods, but the objectionable feature of most photographers' business pullers is the fact that they are based on a supposed or real cut in price. Every week I am invited to buy a coupon for 50 cents that will enable me to get a dozen of \$10.00 pictures at the phenomenal price of \$2.50, with a fine enlargement thrown in for nothing. The same principle underlies the fraternal body schemes — always a reduction in the price. The members of the minor convention I have been discussing have their schemes just as has the low-priced photographer, but one

and all are always aiming at a bigger price for their pictures. One of the features of their gatherings is the discussion of business campaigns, the secret of the success or failure as the case may be.

Minor conventions of this type are being started in various parts of the country. I am much interested in them, in fact, I am a member of one recently organized in Chicago. We meet once a month at one o'clock in the gallery of one of the members and from that time until six practical work under the sky-light is the subject of study. We have supper together at a restaurant, and then business methods are discussed informally until nine, when we separate.

Realizing the value of having a definite purpose, a particular scheme of lighting is allotted as the task for the month, and each member brings at least a half a dozen prints showing his results. These are discussed and then the simplest method of securing the desired effect is demonstrated. The members find the meetings very educational.

Speaking of my experience with these gatherings, I may point out that I find photographers use far too vague terms in discussing photographs. For instance, at our first meeting the problem was a profile with a very narrow band of shadow running along the brow, nose, lip and chin. One member brought the converse, that is a light line, and asked for criticism. One member referred to the chemical effect not being good, but the chairman at once pointed out that this phrase really meant nothing, that the fault of the portrait lay in this, that the cheek was apparently in the same plane as the nose; in other words, there was no suggestion that the head was solid, and that probably the fault lay in the lighting. A print was produced with the same scheme of lighting, in which the suggestion of solidity was very evident, and a moment's comparison showed that in the defective print the patch of light underneath the eye was a very narrow strip, while in the better portrait it extended from the nose right to the cheek bone. Then a subject was put under the



John Chislett,

SECOND PRIZE.

Indianapolis, Ind.

skylight and in a few minutes both the faulty and correct lightings were shown.

Now this is practical educational work. It is nothing particularly artistic or visionary, simply an attempt on the part of a few men to help each other to produce the best kind of goods that are in popular demand, so that he may get his share of business at a good price.

Our meetings so far have not been so productive of results along business lines, the reason probably being this, that not one of the members has ever engineered a big campaign and therefore there are no big experiences to relate. But minor details are discussed freely, and many valuable suggestions are made on how to handle the differ-

ent kinds of customers. But above all there is strengthened the desire for a bigger price and a recognition of the hindrances in that direction. For instance, a photographer doing all his own work rarely realizes how much he is handicapped by his printing room. If a patron enters his studio while he is printing he can not tell whether the caller will stay for only a few minutes or half an hour. Ordinarily it is but a short call and so he leaves his printing frames exposed. The result is that during the time he is attending to his customer his mind is divided between the business in hand and the printing room. Since no man can attend to two things at once the photographer is apt to slight the customer in order to get rid of him as quickly as possible, when a little judicious handling might have tempted a few dollars into the till. A highly successful photographer assures me that over two-thirds of his receipts are to be credited to his systematic "nibbling," which is done so deftly that his customers think him one of the biggest men in town. He realizes the printing room difficulty, so not one of his printers will answer the speaking tube whistle without first throwing large blotters over the printing frames. These lie just at hand for the purpose, so it is only a few seconds to make everything safe, and the printer can give undivided attention to the other matter.

These minor conventions deserve the consideration of the officers of the State associations, because they indicate the trend of the times. It seems to me that at the ordinary conventions too much time is devoted to generalities, to arousing enthusiasm; too little is given to the important details of studio work, routine and business methods. I would much like to see at least half the time of the gathering devoted to the consideration of the dollar side of the business, for after all that is the most important.

F. DUNDAS TODD.

E. W. NEWCOMB.

It is with deep regret that we have to announce the death of E. W. Newcomb, the editor of the *Photo-American*, which occurred on March 29 at Stamford, Connecticut. Mr. Newcomb's connection with photography had continued for many years. After long service with the Scoville & Adams Company, he went into the photographic supply business for himself. About half a dozen years ago he became editor of the *Photo-American*, which thrived under his management. Latterly he turned much of his attention to the manufacture of photographic chemicals and accessories.

PICTORIAL COMPETITION No. 84.

Many times in the course of the year I am asked by camera clubs, art clubs, art and craft guilds throughout the country to send them photographs for exhibition. On such occasions I pack up about one hundred prints and ship them to those interested. Recently some were sent to a club in St. Paul, and a subscriber there sends me a letter regarding the exhibit which I fancy will prove interesting reading. I would draw particular attention to his remarks regarding the color of the prints, because they are very much to the point. Many subjects are very much enhanced by being printed in sepia, or some brown color, but it is almost impossible to reproduce such prints and retain all the fine quality. In passing, let me remark that all over the country there are many small clubs whose members rarely have a chance to see what is considered to be really good work. If the secretary of such a club will write to me, I will be very glad to send a lot of prints to hang on the clubroom walls for a week or so.

ST. PAUL, March 27, 1905.

Mr. F. Dundas Todd:

DEAR SIR,—I take this opportunity to offer my humble thanks for the chance to see some prize-winners and some I feel very sorry for, because they did not win. But everybody can't win, so—. I consider you vindicated in awarding prizes for the print. Certainly color, or, to be general, tone, has much to do with it. Mr. Porterfield, I sup-

THE Percy King Light Controller, which is manufactured by The Scientific Lens Co., 704 E. 116th street, New York, is an article every professional photographer will find useful in the operating-room.



W. E. Bertling,

THIRD PRIZE.

Buffalo, N. Y.

pose, stands pretty much in a class all by "his lonely." But I would have transposed his green one with the one that ran third a couple of months ago. When you published Goldensky's girl portrait some time ago, I didn't feel as you did, but now I think it is the finest portrait I ever saw. Mr. Jukes also is entitled to everything you give him. And how original Mrs. Gatch is. Mr. Curtis Bell's cats were much finer also than the half-tone reproductions. I didn't see it in Mr. Fleckenstein's gray landscape, though. That surely was a fluke, and is besides faked. There may have been a cake of ice floating around there, but it looks awful lonesome. I was agreeably surprised to see my trees among your collection. Somehow whenever I write you I feel like excusing myself for taking up your time, so please do it again. Again thanking you, and wishing you success, I remain,

Respectfully yours,
JOS. DEGGENDORF.

The Snow Picture Competition is always a very popular one, and it was no easy task to single out the prize-winners.

I like to change the judges in these competitions almost every month, and I consider I was fortunate in having for only judge this time a gentleman who is a rare combination of artist and photographer. For twenty years art was his business, photography—especially scientific photography—his hobby. He is now the occupant of a position in connection with one of our leading universities, where his time is devoted to photographic research work, so that I think I was very lucky in the judge.

His decision is as follows:

First Prize—S. S. Lloyd, 827 Prospect avenue, Buffalo, New York.

Second Prize—J. Chislett, Crown Hill, Indianapolis, Indiana.

Third Prize—W. E. Bertling, 90 Main street, Buffalo, New York.

SPECIAL MENTION.

F. E. Weeks, J. R. Igllick, Charles Vandervelde, J. H. Field, James Thompson.

PARTICULARS OF WINNING PICTURES.

First Prize—Taken in January, in hazy sunshine, on Cramer instantaneous Iso; exposure, one second, with ray screen; largest stop of ordinary lens: enlarged from 4 by 5 to 10 by 14.

Second Prize—Made on a dull day in January, at 9 A.M., on Cramer instan-

taneous Iso; exposure, one-quarter second, with stop 8; printed on W. & C. platinum paper.

Third Prize—Picture taken at 4 P.M., in bright sunlight, in February, on Forbes O. L. plate; exposure, one-tenth second, with open stop; printed on Azo paper.

CRITICISM.

The first-prize picture renders very admirably the hazy sunlight effect under which it was taken. What charms me most is the successful rendering of tone value, and in the original there is not one bit of pure white while there is very little black, in fact, the only spot of pure black is the small bush alongside of the house, which forms a fitting termination for the roadway and thus tends to lead one's eye into the distance. The weak point of so many photographs is the lack of atmospheric effect, that is to say, one can not see in the print the three essentials of foreground, middle distance and distance. These are all present here and I would point out how the line of the road, the fence and the bushes by the wayside all help out this idea, lastly how the highest lights are just alongside of the deepest black, thus the general scheme tends to lead the eye into the picture. Of late I have not been bothered by correspondents drawing my attention to the fact that certain parts of their pictures "stand out," which is a heinous artistic offense, because the idea is to get everything to "stand in" or go back. One has to consider the paper as being a sheet of glass through which the subject is viewed, therefore, every object except the nearest one must have the appearance of being beyond the plane of the paper, not in front of it.

I rather took exception to the heavy sky in the second-prize picture, but my friend pointed out to me that the breaking up by the masses of white in the upper region made it all right. Here again we find the feeling of distance very well expressed. In the first place the shocks of corn lead the eye from the foreground to the fence, which marks

the middle distance. The glint of light carries the eye still farther back, while the clouds, being evidently behind the fence or bushes, convey the idea of extreme distance. I rather admire the way one's eye is carried from the first shock to the tree, thence to the light cloud above it, then downward by the darker cloud to the horizontal line of trees and back again to the starting point.

The subject of the third prize picture is just a little bit, but it is very cleverly done. The spacing consists of the snow-covered ground and the clump of trees; these are subdivided again by the trunks in the foreground and the lines of shadow running diagonally across. There is naturally not much distance in a subject of this kind, but the photographer has made the most of the possibilities.

FUTURE COMPETITIONS.

Competition No. 86 — Branch of a tree without leaves, with special consideration of decorative effect. Closes May 31.

Competition No. 87 — Domestic animals. Closes June 30.

Competition No. 88 — Genre pictures, or pictures that tell a story. Closes July 31.

Competition No. 89 — Branch of a tree with leaves, with special consideration of decorative effect. Closes August 31.

Competition No. 90 — "At Home" portraiture, that is, portraits not made in a studio. Closes September 30.

Competition No. 91 — Snap-shot pictures. Closes October 31.

Competition No. 92 — Landscapes. Closes November 30.

Competition No. 93 — Flower pictures. Closes December 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the sender's name and address, *but nothing else*. The outside of the package in addition to our address, may bear that of sender. Accompanying a letter or postcard should be sent us, giving full

particulars of date, light, plate, stop and exposure given; also the printing process.

2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

3. Prints are not returnable.

PRIZES.

First — Books to the value of \$5.

Second — Books to the value of \$2.50.

Third — Books to the value of \$1.

Any books, on any subject, or if preferred, any article we can buy in Chicago.

THIRD ANNUAL EXHIBITION OF THE BUFFALO CAMERA CLUB.

The exhibition for 1905 of the above club was held in March, when over two hundred prints, the work of the members, were placed on exhibition. The club is now an enthusiastic organization of eighty members, among whom are such well-known workers as Porterfield, Schreck, Lloyd, Keller and Bertling, all of whom have again and again been winners in our competitions. The club, we understand, contemplates holding a salon about a year hence, and hopes to receive the hearty support of all amateur photographers in the country. The catalogue of the recent exhibition is a very fine example of the printer's art, and reflects great credit upon the society and its members.

NEW DRY PLATES.

We have recently received from the Carbutt Dry Plate & Film Company samples of two new brands of plates the firm is placing on the market. These are entitled the "Victor" and the "Nonhalation." The former we find to be a very fast plate, in fact, is probably the fastest American plate that we have handled so far, and it ought therefore to be very popular for snap-shot work. We find it develops readily and gives a first-class image with an ordinary developer. The Nonhalation is a very little slower and works just as well as the Victor.

PROFESSIONAL PORTRAIT COMPETITION No. 14.

Some rather ambitious efforts were submitted to this competition this month, but my artist friend decidedly preferred the straight portraiture, and I agreed with his decisions. It gives me a vast amount of pleasure to find Mr. Jukes awarded the first prize, the more especially since it has been awarded by one who is not so interested in him as I am, because for many months I have watched him grow from a fair photographer to one who is now doing really fine work. Mr. Jukes is still a very young man, who took up photography as a profession not so very long ago. He entered these competitions almost at the start and let me understand that he proposed staying by me month by month, as it was the best means he knew of getting a constant line on his work. He has kept his word as to the regularity and his reward comes in the immense improvement he has made in one year. Many others have written to me in very similar terms, but in a few months, because they did not score a success, they dropped out of the running and so I have been deprived of the great pleasure of seeing their work improve.

To me the charm of the first-prize picture is the beautiful tone quality that pervades it. Mr. Jukes has learned the value of a short scale of tone and in this print, as in almost everything he sends, he is very chary of the whites, in fact, there is not a pure white anywhere. The modeling of the face is very effective and the head looks as it ought always to do in a portrait, as if it were a solid. If I were asked to sum up in a word the principal defect I find in most portraits submitted to me, I would say that it lies in the rendering of the cheek that is farther from the lens. In nearly all three-quarter views of the face I find that it has the appearance of coming forward instead of going back, and as a matter of fact more than half the prints submitted to me are bowled over at the start for this fault. Sometimes the defect is due to too strong a light on the cheek nearest

the lens, which is thus flattened out, sometimes it is due to the lighting being from too narrow a source and the far-away cheek consequently looks flat, "like a board," as my old friend James Inglis used to describe it. I would draw attention to the beautiful curves that predominate in this photograph and to the background, which harmonizes with both the lights and the darks.

The second-prize picture is by one who has given proof several times that he has a decided feeling for tone. The lighting of the face is pitched in a rather high key, but the modeling has been kept fairly well, excepting just on the cheek bone on the light side of the face. I have a feeling that the background is too dark.

Photographically the third-prize picture is very good. I would like to draw particular attention to the lighting of the face, because in another article I refer to it incidentally, pointing out the difficulty of suggesting that the cheek is considerably nearer than the nose. This example is fairly good, and it seems to me that success or failure depends largely upon the management of the little patch of light underneath the eye, because it gives the perspective. I have a feeling that a larger and more intense patch of light would have made this more successful.

BRIEF MENTION.

Davis.—Too much blank space in front of face, hands are too prominent and one wonders on what they are resting; background is much too dark.

Field.—Fine tone quality, posing original.

Hassan.—Technically good, but the oval is not a suitable shape.

Zeigler.—Just ordinary; you should study composition.

Leonard.—A very ambitious effort, but I do not like the patches of light so low down on cheek and nose. The idea you try to express is very evident. Although you have missed, I am glad you are aiming higher than you ever did before.

Borrry.—There is no rest in this

print, the lines of the hair detract from the face.

Penfield.—On what is the child standing; the vignette is too close to the cap.

Berkemann.—Read particularly the

Bucklin.—Further cheek projects forward, nearer cheek goes back.

Greene.—Just cute.

F. DUNDAS TODD.

RULES.

I. Only one print to be submitted



Fred Jukes,

FIRST PRIZE.

Rawlins, Wyo.

remarks on third-prize picture and especially note the one about the patch of light on the cheek under the eye.

Zarley.—The ornamentation on the mount suggests a funeral, even to the urn.

in any one month, and this must be from a negative made in the ordinary course of business within sixty days of the date it was mailed.

2. The pictures will be judged on the first day of each month, and all

prints received prior to that date will be included.

3. Requests for private criticism, accompanied by fee of \$1, may be sent along with the print and will be answered after the judging is over.

4. Mark outside of package with the words "Portrait Competition."

5. Prints are not returnable.

PHOTOGRAPHERS' ASSOCIATION OF SAN ANTONIO.

The photographers of San Antonio have organized a local association, based upon lines that are bound to make it a success. These people deserve great credit for the move which they have inaugurated. The main objects of the association are as follows:

(1) The elimination of all fake schemes and ticket rackets.

(2) Closing of all photographic galleries on Sunday.

(3) General good-fellowship.

It is well known that ticket schemes, bromid enlargements, etc., have ruined the business of many good photographers. The agents and fakers who get a photographer to enter into an agreement to fill the contract set forth on certain tickets which they sell, always make all the money, and the photographer never makes any money. How frequently it is that the ticket man takes in the neighborhood of \$500 out of a town in a week or two, selling tickets at 50 cents or \$1 each, and leaves the photographer to finish a contract and do all the work, put up with the annoyances, straighten out all the misrepresentations and finally to foot all the losses. The photographer has all the investment, labor and trouble, and the ticket seller all the profit. Hereafter, in San Antonio, the ticket men can not work his graft, as none of the photographers will listen to him, each and every one knowing that the ticket man can not get in, and by refusing him knows that his competitor can not gain prominence or advertising such as the ticket man invariably persuades the photographer he will lose if he does not accept his proposition.

All the galleries in San Antonio are now closed on Sundays, and there is a fund on hand to prosecute any photographer who will open his studio or do business on Sunday. The law of Texas forbids business transactions on Sunday, and it can easily be seen that with three or four of the leading men in a town united to prosecute any violation, they can easily carry their point; but when all are united the single man stands absolutely no chance to evade conviction where he does business on Sunday. Some photographers believe they can not exist unless their studio is open for business Sundays. This is certainly a mistake, as, if the people can not get sittings on Sunday, they will make it a point to come during week days. If they know they can get the work on Sunday, it is but natural that many of them will put off visiting the photographer until that day.

The feature of good-fellowship should not be overlooked. It is well known that as a rule competing photographers are not on good terms with one another. In San Antonio they now have regular meetings, and the photographers are friendly. If the association accomplished no other result, it would be invaluable.

The San Antonio Association makes no mention whatever of prices; each member can charge what he sees fit for his pictures; and each, we assume, will get the highest prices that his particular work will command. It is a fact, however, that while this matter has not entered into their discussions, yet better prices are being obtained, being brought about by the better feelings toward one another. In other words, there is no more "spite work" going on in San Antonio.

THE Dick Photo Finishing Company, Chicago, has moved its office to the Continental Bank building, 218 La Salle street. The head of the firm has had an experience of fifteen years in developing films and is therefore competent to turn out first-class work.

OUR FIRST HISTORICAL COMPETITION.

Seeing that the announcement of this competition was made in midwinter, I rather doubted if the first one would be very popular; in fact, I felt I would be satisfied if half a dozen readers took part. But, to my great gratification, no less than thirty-five people found that they had material fit for the competition. It is a very interesting collection of pictures, and I have decided that I ought to keep the set intact and add to

and contest will be measured by the same standard. What I am looking for is good exposure, development, printing and mounting. The following are the awards:

First Prize — C. M. Whitney, 153 West Third street, Bayonne, New Jersey. Subject: The Wayside Inn, Sudbury, Massachusetts.

Second Prize — John W. Lee, Plymouth, Massachusetts. Subject: Plymouth Rock.



C. M. Whitney,

Bayonne, N. J.

THE WAYSIDE INN, SUDBURY, MASS.**FIRST PRIZE, HISTORICAL COMPETITION.**

it such photographs as come in to future contests and by and by try to find accommodation for them with some historical society.

The next competition will be June 30, and I will promise my readers that if the contestants are doubled I will place it on our list six times in the year, so it is up to them to determine the frequency of this phase of our work.

The judging this month is based entirely on technical qualities, and the sec-

Third Prize — C. E. Pleas, Chipley, Florida. Subject: An Indian Relic; use unknown, only two of its kind known to be in existence.

F. DUNDAS TODD.

BURKE & JAMES have moved their New York office into larger and better quarters at 17-19 Waverly place, in order to take care of their increasing trade in the Eastern territory.

REMINISCENCES AND RAMBLING RECOLLECTIONS OF EARLY PHOTOGRAPHIC TIMES.

EMBRACING A PERIOD FROM 1839 TO 1840.

CHAPTER III.

It was a curious coincidence that the early development of photography in Great Britain moved in lines parallel with the development of railways, in dates as well as public interests. In the early part of the year 1842 the railway was opened for passenger and freight traffic between the two principal cities of Scotland, a new element of progress to a people accustomed to canal, horse and foot habit. It was something akin to what we are experiencing at the present time in this country in the development of interurban electric railroads, bringing those residing out of reach of railway facilities into closer touch with the business centers and commercial world, and infusing new life into the rural districts.

Not long after I was settled in my new locality, one fine summer day a passenger stepped from the train carrying baggage consisting of a tripod and photographic camera, etc., and asked questions about the best points to view certain places of interest, as he wished to photograph them. Several were pointed out, one from a rising ground in a garden near by, where a fine view of the surrounding country could be obtained, and to which point he had his camera and stand removed. It being the first time I had seen a photographic camera at work I was naturally much interested watching his movements. Seeing this he asked me to take a look at the picture on the ground glass under the black cloth, which I did and was much surprised to see the view upside down. He explained the cause, but as time passed on and I advanced in my optical and other studies, this and other matters became more familiar. He mentioned that his pictures were being taken on silver plates. As he passed on to view other points of interest, I was left with my photographic desires aroused and eager to get apparatus and appliances put in order for

personal experimenting and working the silver-plate process to enable me to obtain portraits from life. The "Daguerreotype" or type of Daguerre being unsuitable for life portraits, not to speak of his absurd patent, etc., and as by this time I knew about the Goddard process, I adopted it and worked it as long as the silver-plate process was practiced by any photographer, even long after the collodion period set in.

I prefer dividing photography into periods along an unbroken line, so far as Talbotype photography is concerned, from its first day in January, 1839, till this day of grace, 1905, leaving the silver plate as a separate department.

NEGATIVE PROCESSES.

January, 1839.—First came Talbotype, the negatives being made on paper from which positive copies in any number could be printed.

1839 to 1843.—This was a very prolific period. Sir John Herschel suggested the use of glass as a support, using albumen, starch or collodion as the vehicle. He also discovered the fixing properties of hyposulphite of soda. Robert Hunt made many discoveries, the most important being development by protosulphate of iron.

1851.—Scott Archer announced his collodion—now known as the wet plate—process, which is in use to this day. The image was developed by pyro for negative work, protosulphate of iron for positives.

1873.—Dr. Maddox discovered the gelatin dry plate. In the present year the emulsion is coated on glass, celluloid and other films, in fact, it is the essential feature of modern photography.

All the different methods of making negatives from which positives can be produced on paper, glass or other mediums are Talbotypes. It will be seen from this that the silver-plate process had nothing whatever to do with the negative and positive processes of today.

I may mention for the benefit of the present generation, who may not be familiar with the early-day appliances.

some of the chemicals and material appliances, also their cost. A few of the principal may suffice:

Bromin, 7s. 6d. per ounce, or \$1.80.
 Chlorid, 5s. per ounce, or \$1.20.
 Iodin, 6s. per ounce, or \$1.44.
 Chlorid of gold solution, 5s. per ounce, or \$1.20.
 Gallic acid, crystallized, 12s. per ounce, or \$2.88.
 Iodid of iron, 10s. per ounce, or \$2.40.
 Mercury, distilled, 6s. per pound, or \$1.44.
 Nitrate of silver, 5s. 6d. per ounce, or \$1.32.
 Glacial acetic acid, 2s. per ounce, or 48 cents.
 Bromid of potassium, 5s. per ounce, or \$1.20.
 Iodid of potassium, 3s. per ounce, or 72 cents.
 Iodized Talbotype paper, 2s. 6d. per packet, or 60 cents.
 Photogenic paper, 2s. 6d. per packet, or 60 cents.
 Bromid pans and boxes, 12s. to 6s. each.
 Accelerating boxes, 10s. to 2s. 6d. each.
 Iodin boxes, 12s. to 6s. each.
 Plate boxes, 8s. to 4s. each.
 Plate cleaners, 10s. 6d. to 2s. each.
 Camera boxes, £3 to 26s. each.
 Camera stand, £2 to 12s. each.
 Mercury boxes, £2 5s. to 25s. each.
 Lens — Voigtlander, £40 to £20 each.
 Lens — Lerebour, £11 5s. to £6 6s. each.

All these with many more chemicals and appliances yearly increasing would require a bulky catalogue to enumerate the various productions coming to the front from different parts and foreign countries in aid of the development of photography. It will not be such a surprise to know that many with some knowledge of chemistry and mechanical aptitude took much interest in fabricating considerable portions of their own requirements in chemicals and other materials.

In my own case my outfit consisted of a primitive assortment of everything that struck me as being suitable. I made a simple camera box with slides; the lens was a small telescope object glass fitted into two sliding pasteboard tubes, with pasteboard stop in front. The tubes and camera were blackened inside. Then I had iodine and bromine pans, these consisting of wide, short, glass tumblers properly covered to suit the plate frames. There was also a mercury box, the mercury being held in an ordinary porcelain egg cup fitted into



R. G. Weeks,

Chicago.

a hole in the bottom of the box while a small thermometer set in the mercury gave the temperature. Small soup plates, thoroughly cleaned, served for washing and fixing trays. Add to these a pair of pliers to hold the plate over a spirit lamp while drying and you have my first outfit, all made from ordinary household articles.

For the silver plate cleaning and polishing I had no difficulty in making all the necessary buffs and using the polishing materials.

Thus equipped I commenced my silver-plate experiences, 1842-3, working at it every suitable chance — not interfering with my business duties. I soon found there was a difference between the visual and chemical focus of my lens and, after many experiments, came pretty near to the point necessary to move the lens. I got pictures — such as they were — from the first trial

onward, and by carefully watching the color on the plate by the iodine and bromine, resulting pictures showed improvement, although I felt the defect was mostly in the lens. Availing myself of an opportunity, I secured a small meniscus lens with boxwood mountings, with three stops of different sizes to fit.

The difference in the pictures with this lens was marked, and with careful working I obtained some very fair pictures on silver plates, as well as Talbotype negatives. The visual and chemical foci were found and marks made for guidance. In each of the processes one had to feel his way, and familiarity led to improvement.

My new railway duties demanded a large part of my time and the new "hobby horse" had often to wait for his master till a spare hour occurred to give him a turn.

About this time I became acquainted with two kindred spirits, who lived in a seaport town near by, situated on the Firth of Forth (Borrowstounness), and although considerably my seniors in years, we had many tastes in common, becoming life-long friends. Mr. Stewart was a merchant and had interests in shipping, whale fishing, etc., while Mr. Hughes was a manufacturing chemist, and the manufacturer of Hughes' celebrated brand of iodine. At this time I was paying 5s. to 6s. sterling per ounce for iodine, and was rather astonished when I saw coming from Mr. Hughes, shipments of ton loads at a time — 35,840 ounces to the long ton.

Both of these gentlemen were of unassuming and quiet disposition, and few outside their intimates were aware of their special hobbies. Like myself, they were amateur photographers and took a keen interest in all that was going on, keeping in touch with the new ideas continually coming out, more especially those from Sir John Herschel and Mr. Robert Hunt, etc., who were indefatigable workers in the new art. Mr. Stewart was a scientific man, familiar with the principles of art, painting and engraving. One of his chief hobbies was making copies and collecting rare and fine medallions and medals, ancient

and modern. As he traveled a good deal in connection with his business, he was always on the lookout for something good and rare. His collection was an exceptionally fine one and very interesting, his principal case or cabinet for storing and exhibiting them was novel and ingenious. He had just pride in displaying his collection to his intimate friends, and many pleasant hours were spent by me examining these and other curios. I remember more especially his collection of rare medals of the kings of Scotland was very complete and fine. In photography his inclinations were chiefly confined to the silver-plate process, and I culled some valuable hints in that way, as he sometimes explained and showed me any particularly fine specimen he had come across. I remember also taking a little trip with him to Glasgow and visiting two of his special friends, Doctor Paterson and Mr. Robert Hart. Doctor Paterson was a keen enthusiast in silver-plate photography, and as an amateur had made some very fine pictures and had acquired the productions of others.

Besides being a doctor his principal business seemed to be producing or making anatomical models — by a combination of wax — of various parts of the human system, showing the ravages caused by various diseases, for the instruction and benefit of medical students. He also took an interest in collecting and making molds and copies of medals and medallions, etc. He was altogether a man of specially rare parts and a conversation with him was true inspiration.

Mr. Robert Hart was an old gentleman with scientific inclinations, but our time with him was very short, as he had other engagements. He invited us to return again very soon and spend a day, when he would be more at leisure.

It is but right that it should be known to whom we are indebted for the many processes which were discovered and described at this early time and later, which able minds found and perfected for our benefit. These men have given every photographic

worker much aid to carry on their operations without greatly taxing their own brain. Might it not be instructive if not a pleasure for some of the inquiring minds of the present time to review and study the old methods of producing the many varieties of pictures obtainable by the action of light? Indeed, when I recall to memory some

of the fine productions of those early days, they would compare favorably with any of the present time, in technical as well as artistic merit, and I may mention a few of the types: Talbotypes, Calotype, Fluorotype, Ferrotypes, Chromotype, Chrysotype, Cyanotype, etc. Description of these will come later.

PETER DOW.

(To be continued.)



J. W. Ward,

Connellsville, Pa.

SECOND PRIZE.

EASTMAN KODAK COMPANY, ROCHESTER, N. Y.

March 10, 1905.

Photo-Beacon Company, Chicago, Ill.:

GENTLEMEN,—We would be pleased to have you announce in your publication that the following-named gentlemen have consented to act as judges in the \$2,000 Kodak Competition: Charles I. Berg, A. Radclyffe Dugmore and Henry Troth.

They are all of them well known by the work they have accomplished and are broad-minded men, with a knowledge of art and photography that will enable them to recognize merit in a picture, no matter to what school it may belong.

Trusting that you will consider this matter worthy of space in your journal, with such editorial comment on the fitness of these gentlemen for judges as may suggest itself to you, we remain,

Yours truly,

EASTMAN KODAK COMPANY,

By L. B. JONES,
Advertising Manager.

A NOTE ON KALLITYPE.

ROXBURY, March 20, 1905.

MY DEAR MR. TODD,—I was pleased to know that Mr. Fleckenstein saw the prints I sent you, for I would like to have such old workers in kallitype as he convinced of the possibilities of the process as I now work it. In a letter from Mr. Tennant, of the *Photo Miniature*, he states that they have had considerable trouble since publishing their monograph on the subject. So many failed to get the results promised in the directions. This must be expected in any process because of variation in sizing and chemicals employed. Moreover, some are not cleanly in manipulation, which is all-important. Some time ago, for a time, I found myself getting dingy prints and after considerable trouble traced the fault to the citric acid I was using. I bought a new lot at another place and immediately I began getting black prints again. I ascertained afterward that tartaric acid is sometimes substituted

for the citric, and I believe that is what had happened in this case, because it looked different from any previous lot, being ground up rather than in crystals.

Sincerely yours,

JAMES THOMSON.

OFFICE OF C. P. GOERZ.

52 UNION SQUARE EAST,

NEW YORK, April 7, 1905.

The PHOTO-BEACON, Security Building, Chicago, Ill.:

GENTLEMEN,—We take pleasure in informing you that owing to the steady and considerable increase of our Western business, and in order to better accommodate our Western trade, we have decided to open a branch office in Chicago. We propose to carry there a complete stock of all our anastigmat lenses, cameras, shutters, Trieder binoculars, and other specialties, and we will be in position to fill and ship orders promptly from our new office. We will thus be able to save from forty-eight hours' to three days' time in the delivery of our goods.

We take the opportunity afforded by this announcement to thank all our business friends for the kind support they have so generously given to the Goerz products in the past. We shall endeavor to sustain in the future, to the best of our ability, the enviable reputation which the high standard of our goods and the straightforward policy of our firm have enabled us to build up during the past ten years.

Our Mr. Benson has been appointed manager of our Chicago branch, while Mr. A. K. Boursault, our advertising manager, will take charge of the Eastern department. The general management of the firm remains, as before, in the hands of our Mr. L. J. R. Holst.

For C. P. GOERZ,

A. K. BOURSULT,

Adv. Mgr.

NELL—Mr. Kammerer is so kind. He said I took a very pretty and very artistic picture.

BELLE—Indeed? And whose picture did you take, dear?

AMERICAN FEDERATION OF PHOTO-GRAPHIC SOCIETIES.

At the annual meeting, held March 22, 1905, at the Metropolitan Camera Club, of New York, the following clubs were represented:

Pictorial Club, of Philadelphia; Capital Camera Club, of Washington, D. C.; Boston Camera Club; Columbia Pho-

todian of the historical records, pending arrangements with the Congressional Library at Washington, D. C., which matter was referred to Mr. Fairman.

Mr. Moss reported completion of the organization of the Federation Lantern Slide Interchange and urged every club to prepare and enter not less than one



MEETING OF THE GOVERNORS, AMERICAN FEDERATION OF PHOTO-GRAPHIC SOCIETIES.

Wm. H. Wallace, Metropolitan Camera Club, New York.

tographic Society, of Philadelphia; Photographic Section, Pittsburg Academy of Science and Art; Wyoming Valley Camera Club, of Wilkes-Barre, Pennsylvania; Salon Club of America; Toronto Camera Club; Brooklyn Camera Club, and Metropolitan Camera Club—nineteen delegates being present.

The Franklin Institute of Pennsylvania was appointed temporary cus-

tomian of the historical records, pending arrangements with the Congressional Library at Washington, D. C., which matter was referred to Mr. Fairman.

Mr. Moss reported completion of the organization of the Federation Lantern Slide Interchange and urged every club to prepare and enter not less than one

hundred slides each and that members compete for the \$100 prize. It was resolved that any photographic society which applies for membership not later than June 1, 1905, shall not begin to pay dues until October 1, 1905. Resignation of the secretary was regretfully accepted and Mr. William T. Knox, of Brooklyn, elected secretary for the unexpired term.

The third Wednesday in March of each year was decided upon for holding the annual meeting.

It was decided to accept the generous offer of the Metropolitan Camera Club to receive entries for the Second American Salon and provide facilities for handling and judging same.

Permanent foreign representatives of the federation were appointed as follows:

Great Britain, H. Snowden Ward; France, A. H. Stoiber; Austria, Mathies Masurin; Belgium, Victor Stouffs; Italy, Alfredo Ornano; Denmark, Copenhagen Photo. Club; Germany, Otto Scharf; Australia, A. Hill-Griffiths; India, Photographic Society of India.

For the Second American Salon it was decided to appoint local advisory juries in each section of the United States (the representatives abroad arranging for similar preliminary juries). All entries to be sent to our representative in each district. A certain percentage of work to be forwarded to the Metropolitan Camera Club by said representative and the balance returned to senders, who thereafter have the privilege of sending direct to the New York headquarters if they so elect. A national preliminary jury, composed of the foremost American pictorial photographers, will then select all entries that are up to the Salon standard and submit them to the jury of painters for the final selection.

The closing date for entries (at New York) to be November 1, 1905, and no entries will be received thereafter.

It was resolved that no photograph which was entered for the First American Salon will be eligible at the Second or succeeding Salons, as it is desired that the American Salon shall be composed of work not heretofore shown and represent the accomplishment of the current year.

SYLVESTER C. BULLENKAMP,

March 25, 1905.

Secretary.

NOTES ON THE RE-DECORATION OF PREMISES.

Just now, during the very worst bit of slack season the professional experiences, he will do well to look around and furbish up his premises. Only too often does he make "press of business" an excuse for excess of litter, rubbishy specimens and dilapidated rooms, but this excuse is of no avail at this season. To begin at the specimens most seen, show cases should receive attention, and any prints damaged by wet should be removed, instead of being left month in and month out, to the general lowering in tone of the display. In towns where many view these specimens daily, a constant change of photographs should be kept up, for remember that you not only wish to attract intending sitters, but also wish to create a desire to be photographed in as many other folks as possible. Any event of local interest, if photographically recorded, makes a good draw. Those cases which are distant from one's premises should receive constant inspection just now, for the fog and sticky atmosphere soon take the polish off the glass. The shop window, if you possess one, is subject to much the same remarks as the cases. Only too often does the photographer keep up a good display when trade is brisk, but gets slovenly when a slack time arrives. If anything, this should be vice versa, for to attract business is the thing.

THE RECEPTIONIST IN THE COLOR SCHEME.

The porch with its display cases must, of course, be kept well swept and clean. If you are having the place redecorated use self-colored wall papers, with perhaps a frieze; the case itself should be quiet and subdued, the better to show off its contents. The newer decorators and designers are supplying most artistic doors. One in leaded glass and fumed oak would probably create a favorable first impression. The walls of the shop or reception room must be so treated as to be absolutely unobtrusive, and so as to show pictures to the best advantage. The newer ways of treating walls

"ARTISTIC LIGHTING," by James Inglis, a new edition, is now ready. Price 50 cents. For sale by The Photo-Beacon Co.

with paneling, etc., give an artistic air to the place, but much can be done at small expense by use of a frieze and picture rail. The wall paper may be of any plain dark color—say dark green, dark brown, or dark blue. We recently looked round a prominent provincial's reception room treated in this latter color. The walls were covered with the dark blue paper and the floor with a carpet of mixed blues and greens,

dress. Certain it is that such small details make for the perfection of the whole.

HARMONY IN COLORS.

If you can not afford to have the assistance of a skilled decorator, remember, as in mounting, to go for harmony, and cut out as many colors as possible. If you wish to have more than one color, use variations of shades rather than another tint.



R. C. Born,

WINTER NIGHT.

Longmeadow, Mass.

Moonlight Exposure, half an hour, December, 1904.

the darker green predominating. There was a dark green picture rail and a plain white frieze above, with a stencil peacock with fan-shaped tail at intervals of about a yard. The chairs and tables were of old English oak. We were much pleased at the quiet yet perfectly satisfying effect of the whole; but judge of our surprise when the receptionist came, and we saw how perfectly she filled the setting. The lady's eyes were deep violet-blue and she wore a blue

A good carpet has a wonderfully refining effect. Let it be quiet in appearance, but also let it feel good to the tread. If you can not afford really good old furniture, a set of chairs in the newer style of applied art will do excellently. Have nothing tawdry or gaudily upholstered.

THE DRESSING ROOM.

The same remarks as to furniture and carpets apply equally to the dressing-room, which, since it is used chiefly by

the fair sex, should have the appearance of a boudoir; therefore the furniture must be lighter and daintier. Since exhibition of pictures is not the chief requirement here, a light wall covering is to be recommended. One or two pictures on each wall of the best you produce will be quite sufficient. You will, of course, provide dressing tables and full toilet requisites. Do not be stingy with the latter. The brushes need not be silver mounted, but the difference between poor and good bristles is most marked. Do not forget the powder and a stick or two of black for the eyebrows. If cost is a consideration, the floor of this room may be covered with linoleum, with a large, thick rug in the middle.

AN ARRANGEMENT IN CREAM AND RED.

If we may be allowed to give an example of general treatment, we will describe one dressing-room of a large establishment in the North. The proprietor explained as a start that he had a theory that rooms facing south and west, which caught the sun, should be treated with the cold colors — greens, blues, whites, etc. — while those facing north and east should be finished in warm tones — reds, pinks, yellows, etc. This being so, and the room facing north, he wanted to use the warm tones, but also to keep the scheme light. Reds for this were impossible, though his carpet and fireplace, as well as mahogany furniture, were of this color. He therefore decided to have cream walls, and if any of you have tried it you will know that this is the only color to go well with rich deep red. The walls are done in a deep cream paper, plain but for faint perpendicular lines and bands of similar tone, giving height to the room. The picture rail, with all woodwork, is deep cream, while the ceiling is cream, and, separating it from the paper, the plain frieze is done in lemon yellow. The whole, with half a dozen suitable water colors on the walls (no photographs), is charming, the deep red carpet giving the necessary warmth.

STUDIO MATTERS — WALLS AND FLOOR.

Coming to the studio, it is difficult to treat of it, very few lending themselves to decorative handling. The same idea

as to making draperies, carpets and woodwork harmonize should be carried out here, having great regard, of course, for the work to be done under the skylight. Perhaps, again, we can not do better than give a short description of another large studio, either for imitation or inspiration. Green is used as the predominating color, chiefly on account of its non-actinic properties, for the modern photographer requires no reflected light other than that over which he has control. The walls are light green, while that part of the roof not covered with glass is a very dark shade of the same color. The doors are dark green picked out with the lighter green. The glass sashes are also light green. The walls, where the background stands, are papered, the one in light green with skirting board the same, while the other is in dark green. There is a picture rail and frieze on each. These walls make a splendid background either for single figures or groups. Another cute arrangement that struck us was that for a distance of 8 feet from each end the floor was covered with dark green cork carpet. This is a perfectly plain material, and makes a splendid ground for full-length figures, interior or exterior. This leaves about 20 feet between the two ends uncovered. A plain patterned green linoleum is used for this, since the camera runs so much better on it than on carpet. The cork carpet was not used, since it is apt to show scratches, and it would be rather monotonous. You may think that mere dark and light green would have the same effect, but that is not so, for the camera and accessories supply plenty of other notes of color.

Perhaps exterior painting is rather outside our province, but we can not help reminding the reader that the skylight should receive a coat of good paint at least once a year, if leakage is to be guarded against.—*British Journal of Photography*.

W. FOSTER BRIGHAM.

YOUR Exposure Tables are all you claim for them; your advertisement does not do justice to them.—*J. S.*

THE CHEMIST IN THE DARKROOM.

Whenever I come in contact with photographers I find them very kind. They give one credit for knowing a great deal about all kinds of photographic things that one has never heard of. One is led to believe that, of all subjects into which one has at all looked, the "kern" theory of the action of light on silver bromid is the one at one's finger ends. I have an immense respect for the "kern" theory, whatever it is, but I would urge that a hard-working analyst has something else to do than wander along these paths of photo-chemical theory. His own reading in the highly specialized literature of his science must teach the student of these things. Yet the chemist—I use the term in the German sense of *chemiker*, not *apoteker*—can be of use to his photographic friends in a totally different way. Working among chemical substances, and manipulating them as he does in much the same way that the photographer has to do, though with infinitely greater care, and in an infinitely greater and more varied manner, he learns little dodges, or knacks, which you will not find mentioned in any of the modern text-books of chemistry.

Faraday, in his "Chemical Manipulation," brought together in one book the handicraft which he himself practiced with marvelous skill, but no modern chemist since his day has thought it worth his while to help the student of practical chemistry, save by personal instruction in his own laboratory. What I have to say must be taken as the hints of a chemist who, has adopted photography as a hobby, and finds the little ways and means of his laboratory practice useful to him.

BOTTLES AND CORKS.

When I order chemicals from the dealer I take pains to induce him to fit the bottles with a full-sized cork, instead of with the abbreviated version of a cork which the dealer calls a "shive." The "shive," in other words, is a cork shaved off flat with the top of the bottle, and when it is pushed tightly in, as it should be, to exclude air,

it is a difficult matter to get it out every time the bottle is opened. It soon becomes damaged in the process, and then the contents of the bottle suffer. The regular corks cost a little more, but they conduce to the proper keeping of one's chemicals, and, in my opinion, are worth what they cost.

When it comes to extracting corks, or shives, or any other form of porous stopper, I know of nothing better than the "other," or handle end of a three-cornered file. A corkscrew will often damage a cork, but the file, inserted sidewise a short distance, and moved crowbar fashion, with the edge of the bottle as a fulcrum, lifts the cork surely from its place.

BOTTLES FOR SOLUTIONS.

I constantly see my photographic friends using the most unsuitable bottles for their developing and other solutions. They will make supreme efforts to pour from these bottles without letting the fluid dribble down the outside. Their care is needless would they but select a bottle with the right sort of "lip." A thick-lipped bottle will not pour nicely. By thick-lipped I mean a bottle of the kind in which port wine or soda water is supplied, with the shank around the mouth deep and not much larger than the neck of the bottle. A medicine bottle, with its narrow, projecting lip, is the kind which pours well, and, better still, is the type of lip belonging to the bottles sold as "German glass, flat-stoppered, free from lead." Though there is no necessity for the photographer to go to the expense of glass stoppers in preference to corks, the nicely made lip of these bottles is a temptation to purchase enough of them to contain all the usual solutions, which I, at any rate, have been unable to withstand.

POURING FROM BOTTLES.

That I should head a paragraph with these words must seem to charge me with *cacoethes scribendi*, but I would plead that many a worker in a darkroom does not know how to do so simple a thing as pour liquid out of a bottle.

In the first place he holds the bottle with the label on the side from which he pours, so that any liquid that dribbles down defaces the label, and in time renders it indecipherable. Then watch the operation of pouring out a few drops, as it is often performed. The bottle will be tilted until the liquid should run from the mouth, but does not do so, being held back by the slightly greasy or dirty lip. Then, as it overcomes the resistance of the film of foreign matter, the fluid makes its escape, but in twenty times the quantity intended. The proper precaution, of course, is to rub the lip over with the moistened finger, and if a very small quantity of solution is required, to use the stopper of the bottle or a bit of glass rod as channel down which to deliver the liquid. If I am constantly wanting small lots of a certain solution I fit the bottle with what has been called (and patented, I believe) a "volumetric stopper," which, in plain English, is the filler of a fountain pen pushed through a cork which fits the bottle, and with one or two marks on its stems for the quantities required. A pressure of the bulb, and the tube is filled; a second pressure, and the liquid over and above the mark is discharged; a third pressure, and the measured fluid is delivered into the place appointed. It takes a long time to set down in words; in practice it occupies about ten seconds. My bottle of bromid is fitted in this way, and I can draw off 10 or 20 minims with the greatest rapidity. For larger quantities than 30 or 40 minims the teat of the pen-filler is not large enough, and then recourse must be had to a bulb, as supplied for the instantaneous shutters.

LABELS.

I spoke just now about labels becoming illegible from contact with the liquid trickling over them. That can be prevented by the means which a chemist is bound to take in his laboratory, where there are acid fumes almost always in the air. The photographer has only damp and his own carelessness to blame if the contents of his bottles are a legitimate subject for speculation. There are several ways of protecting labels, but one which I have

found to stand the test of time is as follows: The labels, having been stuck on with gum, are left till quite dry, and then sized. For this a solution of glue in about twenty times its own weight of water is made with the aid of heat, and applied warm with a broad brush. Again the bottles are put aside to dry, and are then given one (or two) coats of "oak" or "church" varnish. The first sizing is necessary to prevent the varnish entering the pores of the paper and rendering it transparent. A spirit varnish might be used instead of the "oak" or "church" varnish, which is made with linseed oil as a base, but, though it dries quicker, it is not so lasting, being affected by alkalies and spirituous solutions.—*The Photographic News*.
R. CASE REDDY.

COLORPRINTE.

We are informed that Colorprint, the remarkable new paper for making photographs in the colors of nature, will be ready for the market by the time this reaches our readers. The advance sale has been extraordinarily large, and we are asked to say that all orders will be filled in rotation at as early a moment as possible.

Dr. Wilhelm Hesekei, a brother and collaborator of the famous savant, Dr. Adolf Hesekei, is now on his way from Europe to see that Americans are properly instructed in the workings of the new process. Colorprint, while very simple, is of such revolutionary nature that it has been deemed best to have the advice and instruction of one who has been connected with it from its inception, as in anything new it is hardly to be expected that the most perfect results will be secured at the first trial.

IN our advertising pages this month will be found the notice of Ross, Ltd., the famous English lensmakers, announcing the opening of a branch at the American Tract building, New York. Years ago we owned a 12-inch Ross R. R. lens that we thought very fine; to-day we have a Homocentric that we consider a beauty and can confidently recommend.

MOUNTING IN THE AMERICAN STYLE.

The following notes by Major Puyo, in *La Revue de Photographie*, will be of interest now that so much attention is directed to this particular style:

The American process of mounting by a combination of superposed papers has many advantages. As it eliminates the framer, or at least considerably reduces his rôle, it allows the artist to

the secondary margins formed by the successive diminutions of the paper.

GENERAL COLOR OF THE MARGIN.

This is a question of shades. We generally have to choose between the following gamuts: Pure gamuts, including those of blue, green, yellow and red; composite gamuts, including that of the grays and that of the browns. By placing the print on various papers,



John W. Lee,

Plymouth, Mass.

PLYMOUTH ROCK.**SECOND PRIZE, HISTORICAL COMPETITION.**

give to the margin exactly the proportions and the tones desired by him. It is very economical, and also very elastic, for the shades of the papers of commerce are of an infinite variety.

Let us study the different problems which appear when one desires to make a mount of this kind—general color of the margin; general tone of the margin; width of the margin; rhythm to adopt in the succession of tones: rhythm to adopt for the respective widths of

one after the other, we can easily decide which scale to adopt. After this it is necessary to select the three or four shades of the gamut which will best suit the print. This is a long operation, full of doubts. In general, it may be said:

That red prints agree with the gamuts of yellow, green, or blue-gray in the order given; that is, should be framed with harmonizing or contrasting colors.

That the browns are best framed by harmonious colors, using the scales of

yellow, red, brown or gray, and that they are injured by greens and blues.

That the blues only agree with harmonious scales, those of blue and gray.

That the blacks, when they are pure, go well with anything; but if they are cold or warm, they must be treated as blues or browns respectively.

In these operations we are constrained to vary the colors of the mounts for every print, and consequently no precise law can be stated.

GENERAL TONE OF THE MARGIN.

It is necessary to choose between a dark and a light tone. For some time the dark margin has been systematically preferred, but this fashion seems about to disappear; it was undoubtedly the result of a marked and justifiable reaction against the white mount. It seems rational to reserve this kind of mounting for gray and somber effects, as a deeper toned edge brings out the delicacy of the grays. Every vigorous print, however, with deep blacks, will gain by standing out from a light background.

SIZE OF THE MARGIN.

Little can be said; we merely call attention to the well-known rule which states that the margin should be larger in proportion as the size of the print is reduced.

SUCCESSION OF TONES.

Two papers are all that are absolutely necessary to make a frame, but three are generally employed, and even four may be used. The tones should not succeed each other in the order of strength. Thus, designating the tones by the figures 1, 2, 3, 4 — 1 representing the lightest tones, and 4 the darkest — the succession starting from the print should not be 1, 2, 3, 4, or 4, 3, 2, 1, but perhaps 4, 2, 3, 1, or 1, 2, 4, 3. In the triple mount in the same way, one finds the combinations 1, 3, 2, or 2, 1, 3, or 3, 1, 2, or 2, 3, 1, to the exclusion of 1, 2, 3, or 3, 2, 1. We should place next to the print the lightest tone if we wish to especially emphasize the blacks, or a dark tone if it is desired to bring out the whites. To emphasize the sky when it is the principal part of the picture, we should put first a tone

intermediate between the two extreme tones in the sky.

SUCCESSION OF THE PARTS OF THE MARGIN.

In the multiple mount we distinguish, first, the extreme edge, which on principle will be the largest; then, between this and the print, either a narrow edge and a wide one, or a line edge and two wide ones of different widths, or two narrow ones and a wide one between.

In the classic framing the lower margin must always be wider than the upper; if the picture is vertical, the two side edges will be as wide as the top margin; if it is horizontal, the sides will be as wide as the bottom. All exceptions to this rule must have a reason. In pictures with a large amount of foreground, the width of the lower edge may be exaggerated in order to increase the importance of the first plane; but such a disposition would be evidently absurd in a picture with abnormally low horizon. Reasons of the same nature may sometimes justify a lateral displacement, but I must confess that the examples I have seen would have lost nothing by being enclosed in the classic manner.

All these mountings will be happily finished by a very narrow wooden frame, whose tone must verge, but without excess, on the general tone of the mount. Thus, a white frame may be put on light mounts; prints on medium tones can be framed in natural or slightly stained wood, and dark mounts require a dark or black frame.

To this slight dissertation I will add one conclusion: That our own interest counsels us to use very simple frames, and, as far as possible, light schemes of mounting. In saying this, I am pleading for the good appearance of the walls of our exhibitions and for the gaiety of their appearance. By reason of the continuity of the photographic image, the paper is covered everywhere, and pure whites are rare; hence, the whole appears stern and severe. Let us put in our mounts a little of the brightness which is lacking in our pictures, especially when they are crowded too closely on the walls.

LANDSCAPE PHOTOGRAPHY.

I have to look at things through my own eyes, so will try to show you how I see them. Many of the views apply to portrait as well as landscape photography, but it is chiefly about the latter that these few remarks are intended. Plates, text-books on composition, papers, chemicals, etc., can be purchased by any one, so they need not concern us now. If you think, in taking up outdoor photography, that you have a snap, you are liable to wake up some day and find yourself badly mistaken. In the studio you have the light under perfect control and can regulate it at will. Not so with landscapes. There the light is seldom what one could wish, nor are the atmospheric conditions, either: so one must wait until they are and be ready then. One does not need an expensive camera or costly lens, although there are times when they come handy. A box with a generous length of bellows so one can use a long focus lens—say, of about fourteen or fifteen inches for a 5 by 7 plate—makes a very good combination. Other sizes in proportion. Personally, I prefer a single lens used at full opening; and if the picture is still too sharp (as it generally is) a judicious use of two or three thicknesses of celluloid bolting-cloth between negative and printing paper will work wonders. These suggestions to the “f/64” chap will probably produce “the smile that won’t come off.” One needs patience, and by the bushel, too. After a view has been selected, examine it early and late, when the sun shines and when it doesn’t, at different times of the year, and under varying conditions of the atmosphere. Do not be satisfied with inspecting it once or twice, but dozens of times if need be; then take it when conditions are most favorable. Enthusiasm, too, is a requisite—the kind that is not afraid to go after views in all kinds of weather, be it twenty degrees below zero or one hundred degrees in the shade; or to tumble out of bed at three or four o’clock so as to be ready for some of those beautiful phases of early morning. Late in the day also is a good time for landscapes, and some



C. E. Pleas,

Chipley, Fla.

INDIAN RELIC, USE UNKNOWN.

THIRD PRIZE, HISTORICAL COMPETITION.

of the most charming effects can be secured directly against the source of light. Of course, I know this is the opposite of what most instruction books say, i. e., to always have the sun at your back while photographing; but I beg leave to differ from such teaching. The long shadows of early morning or late afternoon are oftentimes the making of a picture. The obliteration of non-essential details can also be obtained, partially, at least, by this practice of directing the camera against the light. While being careful about halation and fogging the plate, please remember that a little of either sometimes proves beneficial. Speaking of fog reminds me that it is not always necessary to have sunshine while viewing. Some good things may be obtained during foggy or misty weather, but for the ideal conditions I know of nothing better than the time just between a fog or mist and clearing off, with the sun breaking through a little, showing objects not only in re-

lief but also with that indescribable atmospheric effect which is altogether charming. Among other requisites, we may mention love for the work, and as soon as one loves one's work, presto change, it is work no longer but becomes recreation and play. If you have never tried landscape photography, you have no idea of the pleasure you are missing. The mere act of going after pictures gets you out into the country, where you can feast your eyes on the many glories of this beautiful world and listen to the many melodies wafted through the air; where the grand and the sublime, as exemplified in the oncoming storm, the roaring cataract or towering mountain; where the silvery quiet of a moonlight night, the gentle stillness of a spring-time evening, the opening flowers or waving grain, all breathing the music of poetry, can be enjoyed in their varying moods. One must also be able to *see* — to look above or through the petty things, to observe the big things, to know of that which is before you *what* to leave out or suppress, and which to show. I mean that deeper and more subtle faculty of *seeing* or being aware of the spirit of the place, "and having one's emotions stirred, not so much by the material things as by what the imagination conjures up and the mind's eye perceives."

J. H. FIELD.

A NOT UNUSUAL EXPERIENCE.

F. Dundas Todd, Chicago, Ill.:

DEAR SIR,—I have taken your journal for a number of years and have been very interested in the pictures and the accompanying criticisms, for I know it must be a great impetus to better work, and especially to the competitors, and consequently I have been "almost persuaded" many times, but my title of "professional" that I won so ingloriously has kept me from it.

Here is the way it came to me: A very few years ago a friend asked me to look under his focusing cloth. The beauty in a landscape I had never seen before. I had seen too much with my eyes to notice the light and shade, the

blending of color or that there were beautiful lines in an old decayed tree.

I never believed before in "The instantaneous change of heart." I never doubted but what I had seen all there was to see in a rail fence, for had I not been sent to drive back the cattle and mend the break in that crooked old thing, oh, so many times?

Well, I made me a tripod and a 6-2 by 8-2 camera, took a few pictures, bought out a lazy photographer and a run-down business, of course. I never had made a picture under a skylight up to this time (note the nerve); gave up a good paying business as a machinist; gave up the real for the visionary—it would have been the ideal had I known the new business; ran the place a few months; worked hard; delivered a few attempts to my very charitable customers; and then a fire came for a sitting one day, and when it went out there was nothing left standing.

After wiping my eyes I raked over the ashes and found that what I had left was enthusiasm—just enough to take to bed and dream, dream of a new studio, everything new; that the fire was, after all, a means of advertising, for every one had read that ad., even the illiterate. But in the morning I found standing at the door, cold clammy hand outstretched and a sarcastic smile, the lean, lank form of circumstance, telling me that my old job at the shop was waiting; and so I accepted the situation, with the agreement that I should have one day of each week out.

I have built a little studio connected with my house, and what photographs I intend to send you each month for criticism will have been made under that little light.

Now, Mr. Todd, if you can show me how I can erase that title of professional, which I do not deserve, have not honorably earned, and which I chafe under as I would an advertising sign tied to my back, I will give you a five years' subscription to THE PHOTO-BEACON and feel an everlasting gratitude.

G. H. C.

THE USES OF A TRANSPARENT CELLULOID FILM.

There are few photographers who do not now use films in some shape or other. If a single unexposed film be fixed, washed and dried, the uses to

hour, when he will find all the image gone. When washed and dried it is ready for use. We may call either of above a transparent film.

During the next three months or so we will have the usual dark, damp days,



E. E. Godfrey,

THIRD PRIZE.

Waukegan, Ill.

which it can be put are innumerable. If the photographer is of an economical turn of mind, he can select a thin one that has been developed, soak it in the fixing solution for an hour, and then throw it into a lukewarm solution of red prussiate of potash for, say, half an

when it will be difficult to print one or two copies from a single negative, and when silver stains will be numerous on unvarnished negatives. If it happens to be a very dense one, a negative that has been varnished only once may even get stained. Varnishing will be

unnecessary, and such stains unknown, if a transparent film is interposed between the P. O. P. and the negative.

There are many cases where a matt paper would give the desired amount of softness from a rather sharp negative, but for various reasons that paper can not be used, a glossy paper being demanded. Here again the transparent film is not only useful, but will frequently enable you to obtain a really good portrait from a poor negative. And, by the way, if you keep the frame on a window sill, thus using a parallel light, you will get a sharper print than if you laid it out in the open with its face pointing to the zenith.

Quick proofs are frequently wanted. The usual method of obtaining these is to rinse the plate after fixing and lay it in the printing frame, when you put in contact a sheet of wet bromid paper, film to film. There is a strong objection here, which can be overcome by interposing a transparent film between the negative and the paper, the latter, of course, being put in dry. The paper thus goes to the developing solution without any previous contact with hypo—a state of things desirable, at least, theoretically. W. J. NAPIER.

AMERICAN PHOTOGRAPHERS.

The Quarter-centennial of our Association will, beyond the shadow of a doubt, transcend any meeting of like kind ever held on this continent, and you are urged for art's sake and for the sake of that true comradeship which is such a delightful incident to artist life, to bring your wares to the show and to shake hands with the best of your fellows.

The showplace, the Mechanics' building, is the best adapted of any structure in the whole country for the purpose of a photographic exhibition. It is indeed a faultless interior and is perfectly suited to our purpose as though it had been built by one of us for us. And be assured that the people of Boston, that city deservedly known for near a century as "the Athens of America," know just how to treat the stranger within their gates, and with the first

cordial greeting forever dispel his notion that he is a stranger.

Don't you want to try for the prizes? Don't you want to receive words of kind and just praise in commendation of your work, from men whose praise is indeed an inspiration? Don't you want, in a beautiful and historic city, in one of the noblest structures, to see, to learn, to grow?

Every detail for the success of the meeting is being carefully wrought out. If you prize your art and wish to see its best possibilities developed, come to Boston and see and contribute to the rich store of the beautiful scenes and faces and forms reproduced from the life of the times in which we live.

A. T. PROCTOR,

Second Vice-President P. A. of A.

I WILL give you an incident and ask for any photographer to equal, or beat it: Fifty years ago a German couple came to our little village to get married. My father being a justice of the peace and notary public, married them. The name of the groom was A. G. Bertelsen. I took their picture for them on the old daguerreotype plate. On the 26th of July this couple celebrated their golden wedding, and I have had the honor of taking their golden wedding picture. I have been in the business continuously ever since in this same place (Sabula) and am still doing business, doing all the work alone, from making the negative to the finishing. Who can beat this record? *Call for the next.—John Esmay, photographer, Sabula, Iowa.*

SADAKICHI HARTMANN, the well-known art critic, has been engaged as principal lecturer and judge of the members' exhibits at the fourth annual convention of the Photographers' Association of Ohio and Michigan, at Toledo, March 15-17. He will also serve on the awarding jury and deliver his lecture, "Some Tone Views on Portrait Photography," at the Washington and Milwaukee conventions, April 18-21 and May 30-June 1.

A NOVEL METHOD OF PUTTING CLOUDS INTO LANTERN SLIDES.

The making of lantern slides, fascinating work though it be, has its troublesome and worrying side. One of these is putting in clouds. My method, I think, has the charm of novelty, and I would like to give readers of the "B. J." the benefit of it, if I may. Lantern slides, as we all know (or should know), with blank white skies, are an eyesore, not to be tolerated for a moment by good workers; nothing looks so bad upon the screen. I will endeavor, to the best of my ability, to describe my method, fairly simple if one does it properly, but therein lies the cause of the worry previously alluded to. It is so painfully easy to do it improperly! Presuming the landscape of the slide is made to your satisfaction — which, with a good worker, is seldom the case — the next "item on the program" is the selection of a suitable cloud negative (a quarter-plate one). Care must be taken to observe that this, when forming the cover glass, is lighted the same way as the landscape, that is to say, from the same direction. For instance, should the cloud negative be lighted from the right, it will, when bound to the slide, be lighted from the left, and vice versa. Your mind being easy on this score, place the quarter-plate cloud negative in contact with the already-made landscape slide, and observe which portion of it comes most appropriately into the sky portion of the landscape slide, bearing in mind the warning previously given as to the lighting. Now, with a small paint brush charged with water-color (red for choice), paint upon the back of the cloud negative the outline of the landscape lantern plate seen through it. This is for the purpose of indicating the place to be occupied by a previously unexposed lantern plate, to afterward form the cloud-covered glass.

The next thing to do is to observe if the cloud overlaps the landscape. Should it do so, then make another line in paint across the back of the cloud negative to indicate that that portion

need receive no exposure; in fact, the portion below this line is eventually covered up to prevent light acting upon it. Now take a half-plate printing frame, with glass in it. The reason a half-plate is used is this, it enables the cloud negative to be moved about so as to use any portion of the cloud. Take an unexposed lantern plate and (in the dark-room, of course) place it film downward, as in printing, within the limits of the painted lines (alluded to above) and put the back of the printing frame on in the usual way. You are now ready for the exposure — not forgetting to cover up that portion below what I had better describe as the "landscape line" painted on your cloud negative, and also mentioned above. Lay the printing frame upon a table, face downward, and expose. Clouds having to be very thin in density, it will not require a lengthy one. In my experience, half of an ordinary wax match, burnt about six or eight inches above the printing frame, is ample, unless the cloud negative be very dense, which, of course, it ought not to be.

An ordinary developer may be used to develop, but the development should only be carried, let us say, a quarter as far as is necessary for the landscape slide. When the cloud-covered glass is developed and fixed, place it against the landscape slide, film to film, but without permitting the two to touch, as one is, of course, wet; and observe if any portion of the cloud overlaps the landscape, shows through a mountain, house or tree for instance. Should it do so, then recourse must be had to a standard solution of ferricyanid of potassium and hypo, which will, if carefully applied with a brush and not used too strong, effectively remove all trace of the obtrusive cloud. This portion of the work is, however, very ticklish to do, and only constant practice and a great deal of patience will successfully accomplish it. It is simplicity itself with what is known as a "cirrus" cloud, but when one has to deal with clouds of the "cumulus" description, it is far from easy.

Some workers, however, contend that

clouds should be made by reduction in the camera, for, by the contact method, the contention is that they "come out" too big in proportion to the landscape. There may be some truth in this, but I have never attempted it, and I should imagine it would be very troublesome, still more so than the contact method. It is, of course, quite unnecessary to add that the tone of the cloud, when developed, should match that of the landscape. In conclusion, may I express the hope that should any of your readers try my method, they will be successful?—*British Journal of Photography*.

HENRY HOLT.

A RAY FILTER COMPETITION.

Burke & James, of Chicago and New York, have now had two Ray Filter Competitions, both of which were very satisfactory and successful, and they have therefore decided to have another one this year. Heretofore they have always given away apparatus as prizes, but this year it is their intention to give cash prizes amounting to \$100. In 1902, their last Ray Filter competition, they gave sixteen prizes, but this year they have not yet fully decided how many prizes will be given or the amounts. We can say, however, that all camera users will be eligible to take part in this competition and that all pictures, either landscape or flowers, will be admitted. The principal conditions are that the pictures must be made through one of Burke & James ray filters, either the "Ideal" or "Isochrom." These ray filters are for sale by all photographic dealers in the United States.

EDITORIAL TABLE.

FROM the Rochester Optical Company, Rochester, New York, we have received a catalogue of the Premo Cameras for the season of 1905. The Premo line is well known, and one would suppose that it would be difficult to make additions to the already numerous family, but an investigation of the catalogue shows at least three new additions. The first is entitled Premo Folding Film Camera No. 3, which is designed for pic-

tures $3\frac{1}{4}$ by $4\frac{1}{4}$, $3\frac{1}{4}$ by $5\frac{1}{2}$ and 4 by 5. It is especially designed for use with the film pack, which, as every one knows, permits of loading in daylight. The instrument has all the adjustments necessary for first-class work and convenience. The second addition is the Premo Reflecting Camera, which is specially designed for rapid work, such as street scenes and active sports of all kinds. The special feature that catches one's attention in this model is its remarkable compactness. The instrument is fitted with a Focal Plane Shutter, which can be used with a speed 1-1200 of a second to a very slow exposure, all the variations in speed being secured very simply. In stand cameras the new design is the R. O. C. View Camera, which contains all adjustments that are essential, these being secured in a very simple way, in fact, it is difficult to conceive how greater simplicity could be attained. A copy of the catalogue will be sent on request.

FROM Milton Waide, 164 Fifth avenue, New York, the deviser of the "One Man Method" of photography, we have received a copy of his prospectus and also a complete series of his lessons. The latter we have read through with very great interest and find them to be exceedingly practical. Any student who takes a course of instruction from Mr. Waide and faithfully follows instructions is bound to acquire an amount of knowledge which is worth very considerably more than the price he charges for it.

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W. H. Porterfield,

FIRST PRIZE.

Buffalo, N. Y.

THE PHOTO-BEACON.

EDITED BY F. DUNDAS TODD.

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No. 6.

"AT HOME" PORTRAITURE.

In recent years, undoubtedly influenced by the very encouraging results attained by many amateurs whose efforts at portraiture are necessarily made in an ordinary room, professional photographers have been giving more or less attention to the problem of "At Home" portraiture. It must, however, be confessed that the average professional away from the atmosphere of his operating-room has very rarely been able to produce portraits that could be considered as being really good. It was therefore with great delight that I looked through several large albums that were submitted to me recently by a young man who is making a specialty of this kind of work. From this collection I was permitted to select half a dozen prints that I might be able to show to photographers the possibilities of portraiture at the sitter's home, feeling that it would encourage many of them to take up this phase of their work more seriously, because, being new, it will prove rather remunerative to those who can make it a success.

Mr. Hutchinson made the pictures that are reproduced in an Illinois town of less than thirty thousand people. As a matter of fact, he simply drifted into the work, having gone home for a short vacation, but at the solicitation of many of the citizens he took hold of it, with very satisfactory results from a financial standpoint, while his supposed holiday lengthened itself from a few weeks into a period of over six months, all this

being done in the face of the local photographers, not one of whom seemed to appreciate the possibilities.

What impressed me most in looking over the work were the magnificent technical qualities, which I consider are simply astonishing when one considers the conditions, because the exposures run from five seconds to a minute, yet children's portraits are rendered just as perfectly as are those of grown-up people.

Every photographer will fully appreciate the utter impossibility of setting forth plain, simple rules for the making of such portraits. Mr. Hutchinson is unquestionably endowed with decided artistic taste and he can not convey that quality of mind to any other, but nevertheless I requested him to tell his story as fully as he could, and here is what he says for himself:

Ever since my return from the visit to your city I have been trying to compose something satisfactory with regard to my "methods," but everything I write seems to be inadequate. My method or methods of making "At Home" portraits are impossible to sift to mere formulæ, as one who has dabbled in this branch can readily appreciate, especially when done professionally, as they have to be made to sell.

Conditions in every home are different, and I believe the keynote to success is one's absolute control of light. Here again no rule can be laid down, and those who can not readily adapt themselves to circumstances had better not undertake it. One's ingenuity and

ability to improve is always taxed to the limit, but therein is the fun, and I made all my work fun.

Possibly a few short statements will serve your purpose better than anything else, and you can cut out and add to.

Necessary to success — an absolute love for the work, a feeling for the beautiful and a knowledge of drawing. Absolute control of light. If the curtain at the window won't do, use that shade, this newspaper or your coat.

Don't attempt to figure out the day before what you are going to make. It saves so much absurd worry, all for nothing. You never can use your plan.

The actual photographic outfit is of last consideration. This needs no describing; rapidity is the essential point.

Study all the time has been of great help to me, and the modeling of a head by a single incandescent light has been of great benefit, showing me effects I wished to get by daylight. Aside from these things, I can say nothing, as the rest would have to be left to demonstration.

No doubt all these things coming from a "boy," as you classed me, seem somewhat like patting my own shoulder, but nothing is farther from my thoughts. These things I deem necessary to success and no one knows better than I how much I have yet to learn. But I am digging all the time and some day it's going to be mine. Very truly yours,

EUGENE D. HUTCHINSON.

My readers will see that Mr. Hutchinson's letter narrows itself down to the old, old story, which is the importance to the photographer of study, but unfortunately, this is what the vast majority will not or can not do. I sometimes wonder if photographers ever really dream of what I think of them when I meet them at conventions. My very presence seems to throw them into a spasm because almost all of them tell me the same old tale. They are just dying to improve their work, are simply thirsting for knowledge, would I kindly tell them what I think of their work, what books they ought to get and how to make a beginning. They are dreadfully in earnest, and I pretend to be just as earnest as they think they are and I go through the little comedy — or

tragedy — as if it were very real. But I know from long, past experience that ninety-nine per cent of all those who have sought my aid will forget both me and my suggestions the moment they reach home. The disease my presence produces I have in my own mind labeled "Art Spasms," but I never feel worried about the victim, because I am pretty certain he will make a speedy recovery.

F. DUNDAS TODD.

A NEW LENS INDUSTRY IN ROCHESTER.

The members of the firm of Bausch & Lomb have associated themselves with George N. Saegmuller, of Washington, D. C., who has gained great reputation as a maker of astronomical telescope lenses and other fine apparatus used in observatories and scientific institutions. The new firm will be known as the Bausch, Lomb, Saegmuller Company, and will manufacture engineering, astronomical, physical and other instruments of precision. The new firm intend to establish a scientific bureau for computation and research on the lines of the celebrated Carl Zeiss Works of Jena, the results to be available both to the new company and Bausch & Lomb. The manufacturing plant of the new concern will be located in the north end of the new addition to the Bausch & Lomb factory.

MILTON WAIDE, of New York, having found it impossible to furnish so much to his correspondence pupils at the low \$10 rate, asks us to announce the fact that in about thirty days the tuition price is to be doubled. It will even then barely pay him for the time and material he furnishes during the valuable course of instruction. Readers will kindly bear this fact in mind.

THE eighth convention of the Photographers' Association of Virginia and the Carolinas will be held at Charlottesville, Virginia, on October 24 to 26, 1905. The officers are working their hardest to make it the most successful in the history of the association.

PICTORIAL COMPETITION No. 85.

Variety is the most blessed word in pictorial composition. It is true also of subjects, and the most pleasing combination to almost every one is that of land, water, trees and sky, these being the four natural pictorial elements in landscape subjects, suggesting all the moods from the greatest stability we know to instability. This is the reason in my opinion why water subjects appeal so decidedly to the pictorial sensi-

The judges made the following awards:

First prize — W. H. Porterfield, 100 Lakeview avenue, Buffalo, New York.

Second prize — R. E. Weeks, 166 Lake street, Chicago.

Third prize — F. E. D. Brown, 144 Lagrave street, Grand Rapids, Michigan.

PARTICULARS OF WINNING PICTURES.

First prize — Made in September, at



Robt. E. Weeks,

SECOND PRIZE.

Chicago.

bility of amateur photographers, and it is therefore no wonder that some of the best work that comes to this office is that which may be classed as water-scapes. Years ago the first round in this competition threw out a great deal of what could best be defined as trash, but in recent years the amateurs are becoming sufficiently educated to prevent them sending in very poor work, so that almost every print has something about it that one could like.

noon, snap-shot, on Cramer iso. plate; enlarged and printed in gray carbon.

Second prize — No particulars given.

Third prize — Made in early part of July, on $3\frac{1}{4}$ by $4\frac{1}{4}$ Eastman film, exposure 1-25 second; enlarged on Rotograph and developed with amidol.

CRITICISM.

Some months ago I happened to describe one of Mr. Porterfield's pictures as being a dream, and one of my readers

was kind enough to make some very cynical remarks about my point of view. He was all right; it was not for him, he not being built that way, but he thought that the particular plan on which he was designed was all right, while any other was necessarily wrong. I have lived long enough to learn to have sympathy with the other man's point of view while I tenaciously hold to my own and will fight for it to the last gasp. But I will not condemn the other man because his tastes are different; nay, I am glad that he is built with a different temperament and so gives the essential spice to life. I make these introductory remarks because once again I am compelled to describe one of Mr. Porterfield's efforts as a dream, and incidentally I will be perfectly willing that my cynical friend should repeat his previous letter, because it will give me a considerable amount of pleasure to receive it, as it will liven up the dull routine of a day's work.

Speaking seriously, however, I notice as Mr. Porterfield gets older he is swiftly evolving to a new point of view. I have never met this gentleman, but I could hazard the guess that he is somewhere between thirty-five and forty years old, because he is just entering into the forty-year-old stage of life where one begins to lose all interest in petty details and to appreciate more and more general principles. Not so many years ago Mr. Porterfield's work was full of detail; now he is striving to render values and uses only such details as will aid him in his work, and so I am able to guess at his age. There is a moral in this to the young camera-worker when he condemns the lack of detail in a picture, for being under the age of forty he can not think any other way, but when he attains that age he will change his point of view. Coming to the print, one can not say much about it, but simply refer to the beautiful rendering of tone that pervades it everywhere and to draw particular attention to the remarkable shortness of the scale, which is in a very few tones, as there is nothing approaching either a pure white or a pure black in the print.

The second-prize picture is an interesting one to me, because years ago I saw the first proof made from the 4 by 5 negative. The print under consideration is an 8 by 10 enlargement. The original did not amount to so very much, but Mr. Weeks has experimented with it off and on at least a score of times, modifying it here, holding it back there, until at last he has brought it to its present stage and wins a prize with it. I must confess I never expected such a result, but the point is worth noticing because it shows that after all the negative is only a means to an end, and that considerable study must be given to it in order to bring out the best possible result.

Not very long ago Mr. Weeks remarked to me that he thought he would be wise if he did not make a single negative this summer, but instead should devote himself to the study of the one hundred and fifty he had on hand, and I think he is right.

Some years ago I took a long trip down the Mississippi and up the Ohio and Tennessee rivers, and I can vouch that this picture is a typical scene: in fact, I made a number of snap-shots just like this, and the print therefore brings back to me many pleasant recollections of a delightful holiday. I would like to point out how all the lines converge toward the glint of white in the sky, which in turn is just above where the river seems to vanish into the hazy distance. I have often pointed out the importance in a subject of this kind of securing a good suggestion of foreground, middle distance and distance, but rarely have I seen the feeling so well worked out as here.

The third-prize picture reminds me of yet another print from the same negative which I saw some months ago, it being infinitely superior to this, and only shows how important a part the printing process plays in pictorial photography. The other, by its beautiful suggestion of gradation, was a picture; this is more an ordinary photograph, by which I mean it simply records that a certain number of objects were in a certain place at a particular time. I partic-

ularly object to the sudden way in which the bridge is abridged without showing any visible means of support.

F. DUNDAS TODD.

FUTURE COMPETITIONS.

Competition No. 87 — Domestic animals. Closes June 30.

Competition No. 88 — Genre pictures, or pictures that tell a story. Closes July 31.

Competition No. 92 — Landscapes. Closes November 30.

Competition No. 93 — Flower pictures. Closes December 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the sender's name and address, *but nothing else*. The outside of the package in addition to our address, may bear that



Fedora E. D. Brown,

Grand Rapids, Mich.

THIRD PRIZE.

Competition No. 89 — Branch of a tree with leaves, with special consideration of decorative effect. Closes August 31.

Competition No. 90 — "At Home" portraiture, that is, portraits not made in a studio. Closes September 30.

Competition No. 91 — Snap-shot pictures. Closes October 31.

of sender. Accompanying a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given; also the printing process.

2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

3. Prints are not returnable.

PRIZES.

First — Books to the value of \$5.

Second — Books to the value of \$2.50.

Third — Books to the value of \$1.

Any books, on any subject, or if preferred, any article we can buy in Chicago.

A LECTURE ON PLANT PHOTOGRAPHY.

In a lecture by Mrs. Scott at the Athenæum, Richmond, on "The Movements of Plants," the many fascinating subjects in the plant world possible to the cinematograph were discussed. If photographs of a germinating seed were taken by the cinematograph at regular intervals during many days until the seed had germinated and sent up its seed leaves, the photographs could be thrown on the screen and spectators could see the earth raised up by the swelling seed, the seed-coat thrown off, the seed leaves emerge, straighten themselves out, and then the first leaves burst forth. The lecturer's first experiments were made with a film cinematograph, but there were defects, as the celluloid film would not stand the damp of the greenhouse. More successful were her experiments with the kammatograph, in which the photographs are taken on a glass disk instead of a film. The disk, 12 inches in diameter, was suspended in a metal ring; it was coated with a sensitive emulsion, just like any ordinary photographic plate, from which it only differs in size, and was capable of taking 350 photographs. When ready for use, the disk was put into the machine, which was light-proof, and by means of a handle at the side could be rotated, so that every part of the plate was exposed before the small oblong opening in front of the lens and the photographs appeared in a spiral on the disk. In many stages of the process a photograph taken once every quarter of an hour was found sufficient. The practical difficulties in this kind of photography were explained by the lecturer, who showed on the

screen some very beautiful examples of her work with the *sparmannia africana*, the weather plant, and the sensitive plant (*mimosa sensitiva*). Mrs. Scott apologized for some imperfections in the photographs, but after three years' work she had only eight successful plates. Her hope was that in course of time the machine might be made automatic, so that the photographs could be taken at night as well as by day.

ILLINOIS COLLEGE OF PHOTOGRAPHY.

While attending the Illinois Convention at Effingham we had the opportunity for the first time of inspecting very thoroughly the buildings and equipment of this institution, the oldest photographic college in the world. The catalogue issued in connection with the institution gave us a fair idea of its general effect, but a personal visit showed that the real thing was much better than the descriptions in the catalogue. Here we have two large new buildings, handsomely situated in a beautiful rural town as perfectly equipped as money and brains can do it for instruction in photography, with a staff of experienced, able teachers. We talked with instructors and pupils regarding the curriculum and found it to be above all things practical, being closely copied after the routine of an ordinary studio, with this important difference: that every detail of the work is done by the students, from posing to finishing, the aim being to make each student an all-round workman. Each member must make at least one negative a day, so many of these he must retouch satisfactorily, and from his negatives he must produce a certain number of good prints in various printing processes. This daily practice, combined with sound theory, is bound to make good workmen. The surprising thing is that photographers are not sharp enough to turn this institution or similar ones to their own advantage by insisting that all aspirants to the occupation of photography take a complete course. Photographers claim to belong to a profession, yet they wish to ignore the only institution that can make their claim good.

PROFESSIONAL PORTRAIT COMPETITION No. 16.

Just after I had made my selections in the present competition, I had a visit from a rather successful amateur, whose special line of effort is portraiture, nec-

essarily in ordinary rooms, but who nevertheless has been honored again and again by having his work hung on the walls of various salons. I spread all the portraits before him and asked him to pick out the first, second and third,



Mr. A. J. White,

FIRST PRIZE.

Schenectady, N. Y.

and I was very pleased to find that his opinion agreed exactly with mine, even to the fourth, fifth and sixth.

The first prize falls to a new contestant, Mr. A. J. White, of Schenectady, New York, who writes a very interesting letter which contains, among other things, the following remarks:

"I have read a good many of your articles and have been especially interested in the portrait competitions. I do not know of any other magazine which gives one such a practical education. I never had a studio until six months ago, but have closely followed the competitions. Now that I am making work with my own name on it, I want to be a regular competitor, and hope to land near the top in time.

"Either the quality of one's work or the cheapness of its price attracts the customers. I prefer the first way, and have had that idea in view ever since going into the business right from school, fourteen years ago. Since coming here six months ago I have had great success, but realize that there are others just as good."

In laying down general principles in my criticisms I frequently refer to the fact that the surface of the paper must be considered as a sheet of glass behind which lies the subject that is being portrayed. The nearest part of this subject may have the appearance of touching the surface of the paper, but all others must look as if they were back from it, so that when it is possible to describe the figure as standing out we are really giving it the reverse of a compliment, because it ought to have the appearance of standing in. This portrait is one of the very best I have come across to exemplify this quality. The tinted margin forms a frame to the print and the hand has all the appearance of being considerably back from the frame, and the rest of the figure is in harmony with this idea. A human figure is a solid object and it is sometimes very difficult to suggest in a photograph this idea of solidity in a portrait, but Mr. White has in this instance achieved very considerable success. It seems to me that this is attained by the use of the

background, which is rather dark but not dark enough to lose quality, conveying the idea of space behind the figure, and also by the light margin which plays the part of a frame. It will be seen that the portrait is sound artistically and yet every photographer will admit that it is one the average customer would be very glad to have of himself.

The second-prize picture is the work of a lady, Miss Julia H. Elton, Woodstown, New Jersey. This is not the first time she has appeared in the prize-winning list, but I think her previous efforts have been more successful, both in posing and in lighting. It is evident that Miss Elton has very fine taste in tone value and for spacing, and these are evident in the large masses in this print, but I must differ from her in the minor spacing of the body, which is very symmetrical. To understand this point I would refer my readers to the first-prize picture and ask them to compare the clothes in the two portraits under consideration. In Miss Elton's work there is symmetry, the arms agree with each other in general direction, even the wrinkles in the clothes are in harmony; the two sides of the unbuttoned jacket correspond, while the tie again makes a symmetrical arrangement of the shirt front and the collar. In the first-prize picture everything will be found very different and therein lies much of its charm. An easy pose may appeal to many, but we see that it has artistic drawbacks.

The third-prize picture is by Mr. Jukes, of Rawlins, Wyoming, who always succeeds in getting inside the money. He sends two prints from the same negative, one in sepia, the other in black and white, suggesting that the second one may be useful for reproduction purposes if he scores. Now, this kind of thing plants me very uncomfortably on the horns of a dilemma, because the tone values are very different, and my verdict is made on the sepia print, but I know the reproduction will be a very poor one. On the other hand, the black and white print will reproduce well, but it will be false in at least one important respect, namely, it will sug-

gest that the figure stands out, while in the sepia print it stands back. However, I will make the trial and reproduce from black and white and see what the result is, warning my readers to note the conditions.

F. DUNDAS TODD.

BRIEF MENTION.

Berkeman — A very ambitious effort, but suggests flatness; I think the background is too dark.

Borrey — Far-away cheek comes forward; otherwise very good.

Moxley — Figure is too much in a heap. You have much to learn about composition.

Waukegan — Not enough gradation in the face; the catch-lights in the eyes are too low down.

Zarley — I wrote this gentlemen direct, but for the benefit of the other readers I wish to mention that the



Miss J. H. Elton,

SECOND PRIZE.

Woodstown, N. J.

mount is absolutely out of harmony with the print. Many photographers, I notice, give little consideration to mounting, but it is a very important part of the work.

No Name — Portrait of a young man. You ought to study "Artistic Lighting," by James Inglis, so as to get a starting point.

RULES.

1. Only one print to be submitted in any one month, and this must be from a negative made in the ordinary course of business within sixty days of the date it was mailed.

2. The pictures will be judged on the first day of each month, and all prints received prior to that date will be included.

3. Requests for private criticism, accompanied by fee of \$1, may be sent along with the print and will be answered after the judging is over.

4. Mark outside of package with the words "Portrait Competition."

5. Prints are not returnable.

QUARTER-CENTENNIAL CONVENTION P. A. OF A.

*To the Photographic Fraternity —
Greeting:*

The Quarter-Centennial Convention of the Photographers' Association of America will take place in the historic city of Boston, August 8, 9, 10, 11, 1905, and bids fair to pass down into history as the *grandest* and *best* convention ever held.

It does not happen often in the lifetime of a craftsman to celebrate so auspicious and momentous an occasion, and from the promises we have voluntarily received from our fellow craftsmen we predict the above.

A most desirable program will be arranged, teeming with instructions and demonstrations of all sorts, besides many amusement features now being considered by the entertainment committee, composed of some of Boston's most prominent photographic stock men and photographers. The Ladies' Committee have left nothing undone to secure the comfort and provide for the pleasure

of all visiting ladies. They are arranging to take the visiting ladies to all the historic points of interest surrounding Boston; and who is there that has not at one time or another promised himself a visit to this most honored of all historic cities?

Cordially and fraternally yours,
GEO. G. HOLLOWAY,
President.

HOME PORTRAITURE.

When with camera and shutter
Portraiture at home you try,
All your friends are in a flutter.
You, with camera and shutter,
Choose your victim, hear him mutter,
Focus on his brighter eye,
And with camera and shutter
Portraiture at home you try.

First you fill your double holder,
Preferably in the dark;
While your soul, becoming bolder,
As you fill your double holder,
Tells you ere the day is older
Doubtless you will make your mark.
So you fill your double holder,
Preferably in the dark.

Enter then, equipped and ready,
Your impromptu studio.
(Erstwhile tenanted by Neddy.)
Enter then, equipped and ready,
Say, from habit, "Whoa! there, steady."
Squeeze and let the shutter go.
Enter, then, equipped and ready,
Your impromptu studio.

Now to test the first exposure
Seek the cellar dark and cool.
Fame perchance awaits disclosure,
And you test your first exposure.
What is this? You don't feel so sure,
Presently you feel a fool.
As you test your first exposure
In the cellar dark and cool.

Firmest friendships fade and falter,
Even love may soon lie dead.
Trifles all your world can alter,
Firmest friendships fade and falter.
*Was it wise to leave that halter
Hanging by your sitter's head?*
Firmest friendships fade and falter,
Even love may soon lie dead.

— *Sinjab, in Photographic News.*

HISTORICAL COMPETITION.

Readers will kindly remember that the date for sending in prints for the Second Historical Competition is the last day of this month.

REMINISCENCES AND RAMBLING
RECOLLECTIONS OF EARLY
PHOTOGRAPHIC TIMES.

CHAPTER IV.

We come across so many historical blunders in photographic records, that at times it is almost impossible to put on

lisle — forty years before the time we are considering — to produce pictures upon the various preparations of the iodid and chlorid of silver. It was in 1827 that M. Niepce left France to visit England, and communicated to the Royal Society an account of his experiments, together with several pictures on



Fred Jukes.

Rawlins, Wyo.

THIRD PRIZE.

a correct basis facts that would dispel erroneous impressions. Readers may be reminded of the instrument discovered by Baptista Porta in 1650 (camera obscura) and used by Wedgewood, Sir Humphry Davy and Sir Anthony Car-

metal plates (which came into the possession of Dr. R. Brown, of the British Museum) spontaneously produced by the action of light in the camera obscura; and more recently by Mr. Fox Talbot, who might more justly than Daguerre

lay claim to the actual discovery not only of the paper process, but of the metallic, as well, as it was well known that in 1838 he had discovered a method of rendering a silver plate sensitive to light, by exposing it to iodine; and Daguerre's iodine process was not published or known until August, 1839, just twelve months afterward!

A London writer at that time stated that "he was intimately acquainted with a scientific man, who made both a mercury box and a camera, to be used in the photographic manipulations as early as 1829, *ten years before Daguerre's process was published*, and it seemed reasonable to suppose that as Daguerre was in the habit of visiting England, with his dioramic views, he might have received some knowledge of what scientific men were pursuing there, and applied the information thus acquired to his own purposes and profit."

We were frequently reminded that scientific researches continued, with experiments on various materials likely to be useful in the "new found art," by Mr. Fox Talbot, Sir John Herschel, Mr. Robert Hunt, Sir David Brewster, etc. One process of Sir John Herschel's, in particular, has been of incalculable value to so many businesses and professions all over the world, to architects, engineers, draftsmen, builders, most of the handicraftsmen, oil field men, etc., for producing working copies of plans, maps, etc., familiarly known as "blue-prints." Well do I remember the pleasure produced when this process of Sir John Herschel's was announced, as well as others by him, also those of Mr. Robert Hunt and Sir David Brewster, etc.

Postoffice authorities soon arranged for the mails to be carried by railway in charge of mail guards on passenger trains, who took up and delivered mail bags at certain stations. At one time a late mail was carried from Glasgow to Edinburgh by a goods (or freight) train which carried passengers and mail. It was frequently late, caused by stops and switching operations. This train was due at my station at 10 P.M., but

it was often 11 P.M. and later when it arrived. I had to remain on duty till it passed. During these long waits time would have hung heavy on my hands had it not furnished me an opportunity to do something in mechanical operations, electrotyping, etc. At that time I had a full faith in a coming electric light, as soon as a practical and economical method was found of producing electricity in quantity and intensity, without the use of battery power. Generators were in the hands of experimenters and being developed up to the practical dynamo, etc. These in time became available for the various electric appliances that followed. We had at this time an electric telegraph with one wire — Bain's — considered the *first one wire* telegraph, using the earth for return current. We had some very powerful batteries, and I soon learned how to work and understand the telegraph, as well as connect and fix the batteries, etc. I experimented with electricity and the making of lamps for producing electric arc lights, which gave a brilliant, though small light, but sufficient to prove in a satisfactory way the similarity with the solar rays. I had determined on experimenting whenever sufficient battery power could be obtained to try and take a photographic portrait by the electric light. I felt convinced it could be done. However, it was not till the year 1847 that everything was in condition. One evening (at 10 o'clock) I had all ready my principal and patient, Mr. Young, tutored and drilled "to be steady, look natural," etc. I was careful to have my silver plate in the best condition, took a portrait of him, developed it by the usual mercury, fixed, washed, gilded, washed, dried and finished, and it was a good picture and considered a fine portrait, undistinguishable from a similar one taken by solar light. It was looked upon as a curiosity by ourselves, but little more was thought of it — although I believe it may have been the first photographic portrait from life taken by artificial light — at least, I had not heard or read of any previous to that,

and the fact was not recorded until long years afterward it was mentioned in the London *Photographic News*, in an article written by my friend, Mr. A. L. Henderson, of London, when he recorded his experience and described his efforts in photographing the great London Derby, for the first time, by the use of his own specially prepared gelatino bromid, rapid dry plates. In recent years some photographers have made a business of the taking of portraits by the electric light.

Many difficulties would arise with me in regard to the working of the silver plate process, principally in getting silver plates when wanted. So I set to work to produce my own requirements by making silver plates by the electrotype process. Taking a suitable plate for a mold, highly polishing one face, and the back protected by a coating of wax, binding screw attachment properly connected with plate, wire and battery, it is immersed in the silver bath when it will soon become covered with silver. When the coating is judged to be sufficient, it is carefully lifted out of the silver bath and plunged into clean, pure water, rinsed and wire connection completed as quickly as possible between the battery and copper bath—to avoid exposure to the air—and at once immersed in the copper bath. It will be immediately covered with copper. When the copper coating is judged to be of sufficient thickness, the plate is removed from the bath. It is well rinsed with water, and then dried either in fine sawdust or by blotting paper, but as I always preferred to preserve on the plate the beautiful, rosy hue of the mother of pearl, opal, which the copper deposit should have on its being taken out of the bath, the drying was hastened after passing it through the water by wetting it with spirits of wine, which was also dried up with blotting paper.

The separation of the deposit from the plate requires great care in case of accident through a drop of water or solution getting on the surface or between the surfaces; but I preferred to make sure that every drop was removed

and dry, when the deposit was not too thick, by cutting all round the edges with a pair of strong scissors, and it then separates quite easily.

My first home-made silver plate was a success. It was prepared and sensitized with iodine, bromide, etc., ready for exposure in the camera. The picture was a portrait and turned out a good one. I now had the satisfaction of knowing that I could make my own silver plates, should any difficulty arise in getting plates from supply quarters at a distance, not to speak of being more economical. I showed this picture to my friend, Mr. Stewart, and explained how it was produced. He was somewhat surprised and praised my efforts, and then suggested I should try and produce copies from the *silver plate pictures*. This same idea had partly occurred to myself during the operations, so I prepared a silver plate picture and took care it was well fixed by again gilding it with hyposulphite of gold and covering the back and connections with a coating of beeswax. Carefully refiltering the sulphate of copper solution, as I wanted to try a wholly copper copy—this was arranged as before described, and when the copper coating was considered of sufficient thickness, it was properly washed, dried and finished, and then the edges clipped. When doing so, my anxiety became intense to see the result, and when the two surfaces separated, lo! my eyes beheld what they never saw before, an electrotype copy from a silver plate picture, absolutely perfect—if possible, more beautiful than the original, not only beautiful, but I called it lovely. Nothing in photography previous to this impressed me so much as this lovely electrotype picture, and best of all, these copies could be done at night, not requiring the solar light. I made a number of them, and those who saw them were surprised and delighted, and could not stop talking about them. My friends, Mr. Hughes and Mr. Stewart, got copies and were highly pleased, and encouraged me to persevere till pictures were produced of the highest quality.

As the time slipped past, the silver plate process of photography was gradually but surely superseded by other methods. I have often looked back with regret through intervening years and many times resolved to resume some of the old processes, and have felt it would prove an instructive pleasure, and for the benefit of the present generation (or those who may have forgotten) I will describe briefly how we set about producing a silver plate picture or portrait in six operations, viz.:

1. To work the type of Goddard or "Goddardtype," cleaning and polishing the silver plate.

2. Rendering its surface sensitive to light by exposing it to a series of vapors, first, iodine; second, bromine or chlorine, and last, iodine. Ready to put in dark slide for exposure.

3. Exposing the prepared sensitive plate to the focus of the lens in the camera for the necessary period, found by experience.

4. Bringing out the picture by exposing the plate to the vapor of mercury till all details are fully brought out.

5. Fixing the picture by removing the sensitive surface of the plate which has not been acted on by the light, by the action of hyposulphite of soda.

6. Thoroughly washing the plate to remove the chemicals, drying it over the flame of a spirit lamp. Before drying the plate is to be placed on a level stand and covered with a solution of hyposulphite of gold (chloride of gold and hyposulphite of soda) and heating the plate over the flame of a spirit lamp held under it till a series of bells rise, and keeping it at boiling point till it is gilded by the silver being dissolved and gold deposited in its stead, thus improving the picture and preserving it in a better condition to withstand the action of the atmosphere; but it should be protected from contact with the air, as much as possible. Put in a case or frame covered with glass and closely sealed from the air.

PETER DOW.

(To be continued.)

PASSE-PARTOUT FRAMING.

The rapidly increasing number of beautiful prints of various kinds, which in themselves are inexpensive, but of such an artistic quality that, if properly framed, form a valuable help to the decorating of the study or den, often causes the owner to wish that framing was less expensive, and that some method could be devised which would permit of the use of these art objects upon the walls in some more attractive and permanent manner than by fastening with pins or thumb tacks. This can easily be accomplished, writes Charles E. Fairman, in the *Scientific American*, by means of the passe-partout, a method which is at the same time not only inexpensive, but serves to give the print a finished appearance, and preserves it fully as satisfactorily as if framed expensively.

In order to make passe-partout frames properly, a board should be prepared as follows: Select a smooth board without warp, 2 or 3 inches longer and wider than the largest frame desired. Finish the two longer sides by nailing on the edge a narrow strip, which should project above the working side of the board not more than 1-16 of an inch. This will be found sufficient to prevent the glass used from slipping off the board, and will provide a resting shoulder against which the glass may be pressed during the making of the frame. On one side of the board draw a line at a distance of $\frac{1}{2}$ inch from the projecting edge; at the other side of the board a line should be drawn $\frac{1}{4}$ inch from the opposite projecting edge. These lines should be marked plainly and accurately, as they form the guide lines upon which the binding strips are placed, and if they vary in distance the binding strips can not be accurately placed in position.

The binding strips should be selected from some strong paper, or gummed binding cloth, that will either harmonize with the print to be framed or with the paper which may be used as a mat to give the print a sufficient margin. For this purpose I use the lighter grades of



Eugene Hutchinson,

"AT HOME" PORTRAIT.

Danville, Ill.

cover papers, which are cut into strips by the use of the common yard-stick and a very sharp knife. It will be understood that the placing of a smooth sheet of binder's board underneath the

cover paper will render the cutting of the binding strips much easier. The strips should be 2 inches wide if a large-size frame (11 by 14) is to be made; for smaller sizes a narrower strip may

be used, but the wide strip is much easier to handle and gives added strength to the frame.

For backing the ordinary strawboard is all that is required. This can often be found among the waste pasteboard boxes in the home. In fact, parts of old boxes are preferable to new stock bought at the paper warehouse for the reason that new stock is rarely thoroughly dried, and I have known instances where the drying of the backing-board has caused such a warping tendency that the cover glass has been broken. The backing-boards should be cut to the exact size of the glass which is to be used in framing. Any deviation in the measurement of the glass and the backing-board will result in an unsightly frame that the most skilful worker can not avoid.

The hangers for the frame can usually be secured at stores where picture frames are made. If these are not procurable, the small brass rings can be purchased at hardware stores, and narrow strips of tin can be used to form the loops on which the rings are fashioned. These strips should be fully 2 inches in length, and should be threaded through the rings, then doubled so that the ring will hang midway between the ends, which are passed through narrow slits in the backing-board, and then spread in the manner of a paper fastener and hammered down until they are perfectly flat. To make the frame, proceed as follows: Place the glass upon the board so that it will be in perfect register with the projecting edge. The binding strips should have been previously moistened and the surplus water blotted off. With a bristle brush apply Higgins' paste, or some similar mountant, to one of the binding strips, and work the paste in thoroughly, so that the strip will be well saturated with the paste so well worked in that it will not ooze out upon the glass. This precaution will not be necessary if a prepared gummed strip is used. The binding strip, which should be of the exact length of the side of the glass to be covered, should now be laid upon the glass, using

the line described above as a guide. Press the strip gently with the fingers until partial adhesion results, and then rub in perfect contact with a soft cloth. The glass should then be turned, and the opposite side covered in the same manner.

In binding the last two sides, tiny strips of paper should be placed on the edges of the binding strips already in position, so that the paste from the remaining strips will not soil the corners which are to be mitred. In finishing the last sides, the outer strips should be mitred by the use of a mitre pattern made from a thin piece of wood or cardboard. This pattern is laid upon the binding strips after they are firmly placed in position, and the outer strip cut with a very sharp knife. The corners, with the underlying protecting paper, can then be removed, and the last binding strips rubbed into thorough contact.

The cover glass is now ready for the final binding with the print and the backing-board. The glass should be removed from the board, and a clean paper spread upon the board, upon which the glass is placed face downward. Upon this lay the print, with its mat — if any — face downward, place upon this the backing-board, taking care that the hangers are in the right position, or the framed print may be found, when finished, to be arranged for hanging in a reversed position. Great care should be taken to see that the print, the mat, and the backing-board are in accurate register. Paste should then be liberally applied to the projecting edge of the binding strip on the right-hand side, and, when thoroughly pliable, the strip should be closely drawn over the edges of the frame, on to the back of the backing-board, and then rubbed in contact with the soft cloth. The frame should then be turned so that the left-hand side occupies the place of the right side, now completed, and this side and the ends treated in the same manner.

To make passe-partout frames so perfectly that they will have the appearance of frames made by the professional

frame-maker requires only ordinary mechanical ability, and the care which is required in doing even the simplest things well. If the instructions given are carefully followed, it will be found that choice prints, book covers and

SOMETHING NEW IN MOUNTS.

A DESCRIPTION OF THE LATEST BEAUTIFUL DESIGNS FOR AMATEUR WORK.

Amateurs who are constantly on the alert for appropriate and harmonious mounts and bristol boards will be inter-



Eugene Hutchinson,

"AT HOME" PORTRAIT.

Danville, Ill.

posters can be made into attractive ornaments for the home at a minimum cost, with the added satisfaction that the work has about it that personal quality and interest which is never felt when the work has been done by others.

ested in the handsome new designs recently introduced by the A. M. Collins Manufacturing Company, of Philadelphia.

These mounts are made more elaborately and in a greater number of styles

than any other line. Their duplex colors present a different shade on each side, so that the photographer has a choice of two color harmonies.

Among the new designs in the Collins line the following are especially worthy of mention:

"Landseer," a delicate gray board with beveled plate sunk center containing insert of a darker tone.

"Photogravure Bristol," made in several delicate tints and offering a choice of two handsome surfaces—a rippled effect and an egg-shell finish.

"Bel Art Bristol," a stiff and snappy stock, with heavily embossed surface and a different shade on each side.

"Corot" (patented), a mount with an exquisite roll design, giving a rich framelike effect to the photograph.

"Bristol Art Mount," a thin, flexible bristol board with rippled surface and beveled depression.

For 10 cents in stamps the A. M. Collins Manufacturing Company, Philadelphia, will send samples of these and other artistic designs particularly intended for amateur work.

A free catalogue may be obtained from any dealer or direct from the manufacturers.

NEBRASKA CONVENTION.

SCHUYLER, NEB.

Photo-Beacon, Chicago, Ill.:

DEAR SIRs,—Will you kindly announce in your publication our association's dates for this year, which are May 10, 11 and 12. We meet again in the University Art Hall at Lincoln. Our program this year assures us of the best and most profitable meeting in our prosperous history.

Mr. George G. Holloway and others of repute will be among us. The new "Aristo" lamp will be thoroughly demonstrated in its printing and negative making merits. The afternoon of field sports, together with a fine banquet, make the social features unusually attractive.

Special attention is called to the Grand Portrait Class open to the world,

three pictures, no restriction as to size; prize, a fine gold medal. Exhibits in this class should be sent prior to the 7th to President A. C. Townsend, 226 South Eleventh Street, Lincoln, Neb. Many other classes will interest our local photographers.

Fraternally yours,

NEBRASKA PHOTOGRAPHERS' ASS'N.

For particulars, address Secretary, Schuyler, Neb.

SULPHUR-TONED SLIDES.

The solutions required are:

1. Bleaching solution made up as follows:
Iodine 45 grains
Potassium iodid 110 grains
Water to 10 ounces
2. Sodium sulphite, five per cent solution.
3. Sodium sulphid, twelve per cent solution.

The slides are immersed in the bleaching solution until the images change to a blue color by reflected light. At this stage the half-tones and high lights appear yellow. By transmitted light the color is dark brown, which, however, would appear black on the screen.

The slides are now transferred to the sulphite bath No. 2, until all blue color has disappeared, and finally are immersed in the sulphid solution No. 3 made up as follows:

Sulphid stock, twelve per cent solution 1 ounce
Water to 20 ounces

The action is instantaneous, and the slides need not be kept in the solution longer than a minute. They are then thoroughly washed and dried in the usual manner.

When quite dry it will be found that the film has a dead matt surface, rough to the touch, and that the image has considerably increased in intensity, with just a suspicion of veil in the high lights. The matt surface can be removed by rubbing the film with a little fine polishing powder, which has also the effect of increasing the brilliancy. The slides should then be varnished with a celluloid varnish for preference, in order to secure the maximum amount of transparency.—*Photography.*

AMERICAN FEDERATION OF PHOTOGRAPHIC SOCIETIES.

THE FRANKLIN INSTITUTE OF THE STATE OF PENNSYLVANIA.

PHILADELPHIA, April, 1905.

The Franklin Institute of the State of Pennsylvania, having been chosen as the custodian of the historical photographic collections of the American Federation of Photographic Societies, submits the following rules and regulations for the establishment, preservation and publication of this collection, and invites photographers to contribute to the collection:

Pictures must be photographic prints, carbon or platinum, made from negatives not less than 4 by 5 inches (except stereoscopic pictures) nor more than 10 by 12 inches. Not less than two copies nor more than three of each subject should be sent; one permanently mounted by the sender, the others unmounted.

Each picture must be marked so that it can be identified and addressed to the Secretary of the Franklin Institute, Philadelphia, Pennsylvania, fully prepaid and, preferably, forwarded through a society belonging to the Federation. Under separate cover, memoranda as to maker, subject and other important data should be forwarded to the same address.

EXTRACT FROM UNITED STATES POSTAL REGULATIONS.

"Matter produced by the photographic process . . . is printed matter. The rate of postage is 1 cent for each two ounces or fraction. Full payment required. Limit of weight, four pounds, except it be a single book."

The custodian will mount and preserve in suitable albums, or otherwise, one of the unmounted pictures, and if two such have been sent will preserve one, unmounted, as a duplicate.

The following classification of photographs has been adopted:

CLASSIFICATION OF PHOTOGRAPHS.

1. Buildings and localities of historic interest, including ancient landmarks and battlefields.

2. Customs and costumes.

3. Portraits from life of distinguished persons.

4. Photographs of documents of historic or public interest, including those of a scientific character.

5. Catastrophes and incidents of public interest.

6. Machines, implements and scientific apparatus, especially those passing out of use; including manipulations in manufactures and trades.

7. Transportations by land and water, ancient and modern.

8. Buildings, bridges and other structures; also illustrating methods of erection.

The custodian reserves the right to reject pictures deemed unsuitable for the collection. In such case the picture will be returned. The pictures accepted shall be considered the property of the custodian.

The custodian will, from time to time, forward to one of the constituent societies of the Federation a prepaid package containing a collection of record photographs mounted by the senders. The receiving society may retain this collection a reasonable time for inspection or exhibition, and will then forward it to another society, and so on, until each society (that desires the same) has received it; then it is to be returned to the Franklin Institute. All packages are to be sent fully prepaid.

The albums will be open to inspection at suitable hours under the rules of the Franklin Institute Library.

WM. H. WAHL,

Secretary of the Franklin Institute.

THE Western office of the C. P. Goerz Optical Works will be situated in the new Hayworth building, corner of Wabash avenue and Madison street, Chicago, which is right in the heart of the shopping district. The Western manager, Mr. Frank Benson, will be very glad indeed to receive visits from those who are interested in lenses.

The Photo-Beacon Exposure Tables are guaranteed correct. Price 25 cents.

A SIMPLE SULPHUR TONER.

At the Polytechnic Photographic Society's meeting on March 23, Mr. John H. Avery strongly advocated a toning bath for bromid papers, which, he said, was economical in working, easy to manipulate, and free from a tendency to blister the paper. Although specially designed for use with the "Wellington" brand of papers, it was equally useful for other makes.

The formulæ are as follows:

No. 1.

Potassium ferricyanid	...400 grains
Potassium bromid	.....600 grains
Water to	..... 10 ounces

Dilute one ounce of this with nine ounces of water, and allow the prints to bleach in this. Rinse them in water and transfer them to —

No. 2.

Sodium sulphid	..... 1 ounce
Water	..... 10 ounces

Half an ounce of this is diluted for use with nine and a half ounces of water.

This toning solution, the lecturer said, had been exhaustively tested by Messrs. Wellington, and he had the greatest confidence in recommending it for use with their papers. He remarked that while amidol had been used for the development of the prints he was toning that evening, it was quite possible to get as good results after using any other of the usual developers, but he could recommend edinol as one of the best.

THE STRENGTH OF DEVELOPERS.

Some years ago Von Hübl was at much trouble to work out the strength both of developing agents and of alkali which gave the best results, and, as far as we know, his figures have never been published in United States weights and measures. The relative strengths of the different alkalies employed may be taken as indicated by the following factors, the use of which will be subsequently pointed out: Caustic soda 1, caustic potash 1.4, potassium carbonate 10,

sodium carbonate anhydrous 8, sodium carbonate crystals 16. The first column of figures below gives the best strength of each substance in the solution applied to the plate, in grains per fluid ounce. The use of the figures in the second column is as follows: For each grain of the developing agent (pyro, metol, amidol, etc.) we must use a proportion of alkali expressed by the figure in the second column multiplied by the factor given above. The example below will make this clearer.

Pyrogallol	.....1½ to 3	.. .95
Pyrocatechin	..... 3	.. .72
Hydroquinone	.....2½ to 5	.. .72
Glycin	..... 5	.. .43
Adurol	..... 5	.. .42
Para amidophenol	.....2 to 3½	.. .28
Metol	..... 3	.. .23
Eikonogen	.....3¾ to 7¼	.. .15
Diogen	..... 6	.. .12
Amidol	..... 2 to 4	.. —

Caustic alkalies should not be used either with pyro or with metol. Amidol requires no alkali. Example: Let us suppose we wish to use adurol and potassium carbonate. The first column tells us that with adurol a strength of 5 grains to the ounce is best. Taking the figure in the second column, .42, and multiplying it by 10 (the factor for potassium carbonate, given above), we get $.42 \times 10 = 4.2$, from which we learn that for each grain of adurol we ought to take 4.2 grains of potassium carbonate. As we have five grains of adurol per ounce, we ought to have 21 grains (4.2×5) of potassium carbonate per ounce.

THE *Grand Magazine*, in a recent article by Sir Martin Conway, recommends that some people should make a specialty of collecting photographs, because as a rule they are destroyed within ten years of their production. Some people consider ten years is too long for the average photograph to exist; nevertheless, there is certain to be among the thousands of those produced daily a considerable number that fifty years hence would be considered as of inestimable value.

THE "WALRUS" ON DEVELOPMENT

Without naming names I may mention that two prominent apostles (I use the word in a strictly Pickwickian sense) of opposite schools of development have been publicly advocating

are entirely opposite and contradictory in character, but I accept both; and if either of them is better than the other it is certainly better. My private opinion, which I dare not divulge, is that they each are. And vice versa.



Eugene Hutchinson, "AT HOME" PORTRAIT.

Danville, Ill.

their views before enthusiastic but mystified audiences. Having the pleasure of the personal acquaintance of both gentlemen it has been incumbent upon me more than once to accept unreservedly each of their theories. They

Not for a moment, however, will I agree to a comparative test suggested by a writer in a contemporary. He had heard the theories of both gentlemen, and seen the results they each produced in the shape of lantern slides, and after

admitting that there was little to choose between these results, he mentioned that the only way to test them critically would be to project, side by side, slides by the antagonistic advocates.

Let us apply this idea to another case. A justly celebrated slidemaker, whom we will call Snooks, pours his developer on with the left hand. I pour mine on with my right. We show our slides side by side, and, as a matter of course, the Snooksian slides are knocked into a hopelessly battered cocked hat by mine. Is that a demonstration of the fact that it is better to pour out the developer with the right hand? Not at all. It shows my superiority over Snooks in artistic ability, technic and everything else, and I should still beat Snooks if I poured the developer on with my foot.

There is a good deal of rubbish talked about this development business, just as there is on every other photographic topic. The thing is really simplicity itself. Put a plate, or fifty plates if you like, into some developer. Leave it, or them, there for the greater part of some time. Take it, or them, out. If they are right, they are right, and if they are wrong, they are wrong. And whichever way it is, what in the world does it matter?

A man will tinker and potter about for long hours developing a plate, and if he gets a passable result he attributes it to his tinkering and pottering. How does he know that the errand boy who in his spare time develops for the local chemist would not have got a better result? The other man puts two drops of rodinal in a cistern of water, throws in a hundred films, and goes away for a fortnight's holiday. When he comes back the films are not only developed, but fixed, and if he had stayed away long enough for the water to evaporate, they would have been dry, too. Then why tinker? says he. But he can not prove that the tinkerer would not have got results nearly as good. The judicious developer (or tinkerer) does not *always* spoil his plates.

The most comfortable procedure is

not to develop plates at all. Doing so is merely a habit. We have been brought up with the silly idea that if we expose a dozen plates we are in duty bound to develop them. Sheer nonsense. Let them alone. Console yourself with the idea that those twelve plates bear the twelve masterpieces of photography. Develop them and your consolation vanishes. Then why develop them? When you feel, dear reader, that you *must* do some developing, drink a bottle of potassium bromid solution. It is an excellent restrainer. And, between ourselves, you know, you have got quite sufficient abominable negatives without adding to the number. Now, haven't you? — *Photography*.

A LESSON.

A story was related the other evening at the Pharmaceutical Society, which reminds us of the complex processes we sometimes see put forward for the after-improvement of the print or negative. A French country physician despatched a patient to a celebrated dermatologist in Paris. Soon afterward he called to inquire after his condition. The great man received him cordially. "Come," said he, "and I will show you your subject, a most wonderful cure, I assure you." To the doctor's horror he was led to where, on a slab, lay stretched the body of his hapless patient. "What!" he gasped, "dead! dead!" "Why, yes," conceded the specialist; "but, my dear monsieur, look at his skin." That appears to us to represent a state of things very strongly analogous to those which prevail in many of the processes which we see recommended. After a print has passed through the half-dozen baths which some formularists will airily propose to subject it to, what has become of the scale of tones, or the purity of the lights, or the intensity of the shadows? For example, we often see various drastic remedies for under and over exposure of bromid prints, but the practical photographer knows that his best plan is to expose another piece of paper.

PLATINOTYPE PRINTING.

A paper on platinotype printing by an expert such as Mr. W. H. Smith, of the Platinotype Company, is likely to not only draw a record attendance to any photographic society's meeting, but is likely to impart more practical information to those present, regarding this

BLACK IMAGE PAPERS.

The lecturer, dealing first with the black image papers, said it was important to allow full development, which with the bath at 60° F., would take place within thirty seconds; with correct exposure overdevelopment was impossible. If prints had been accident-



Eugene Hutchinson,

Danville, Ill.

"AT HOME" PORTRAIT.

popular process, than any amount of demonstration by the dilettante user of the paper. Such proved to be the case at the meeting of the Croydon Camera Club, a very few weeks ago, and Mr. Smith's remarks were further emphasized by the fact that nearly 200 platinotype prints were produced, and later, distributed by lot among those present.

ally overexposed, development had to be arrested at an earlier stage by plunging them in the acid bath directly the right depth was attained, but the results obtained were not so good as in the case of normal exposure and development, and there was a tendency to granularity. Harsh negatives might be dealt with by under-printing, and developing at 140°

F. In this connection old paper gave softer prints than new, a fact which might be taken advantage of. For very flat negatives, or when using stale paper, the addition of one grain (in no case to exceed two grains) of bichromate of potash to every 20 ounces of developer, gave noticeably increased contrasts. This property gradually wore off in the developer, and might be compensated by the very cautious addition of fresh bichromate. Unless any special object was in view, such as local treatment, or sketchy vignetting, he did not recommend the use of glycerin; it gave a somewhat warmer black, less contrast, and a slight loss of quality.

INTERMEDIATE TINTS.

Mr. Smith then proceeded to show how intermediate tints, between cold black and warm sepia, might be obtained, which may be tabulated as follows:

Paper.	Developer.	Temperature.	Color.
Cold bath	D Salts	60	Cold black
"	"	140	Warm "
"	Old Sepia	170	Brown "
Sepia	Sepia	60	Cold Sepia
"	"	170	Warm "

SEPIA TONES.

The "Sepia" process was next considered, and Mr. Smith explained that the paper itself, and not the bath, possessed the "toning" qualities: an old bath, however, gave richer tints than a brand-new one, owing to what it had derived from the paper. To obtain the best color, the temperature of the bath should not be allowed to drop below 160° or arise above 180° F., which might damage the paper; 170° F. might be considered normal. Development was complete within a few seconds. Immersion in the acid baths should not be too prolonged, provided a fair quantity of solution was used; five minutes in the first and ten minutes each in the second and third was sufficient.

AFTER-TREATMENT.

Platinotype papers did not require a long after-washing; three or four changes for ten or fifteen minutes was

ample, after which the prints might be suspended, which was preferable to drying between blotters. Owing to a hot developer being used, the necessary exposure to light was about twenty-five per cent less than would be given in the cold bath process, and it followed from this that heating the developer was, within limits, a remedy for underexposure, with the latter.

Printing might be accurately gauged by an actinometer; the lecturer preferred "Johnson's single tint" for this purpose. He did not advocate mercury toning of black papers; in nearly all cases a distinct difference in color between the high lights and shadows was observable.

IMPROVING PLATINOTYPE PRINTS.

It is not every platinum printer who knows that he can get much more brilliant prints from thin negatives than would otherwise be the case by the addition to the developer of a trace of ammonium bichromate. Potassium bichromate has been suggested for the same purpose, but the ammonium salt is preferable. Two hundred and forty grains of ammonium bichromate may be dissolved in ten ounces of water, and this, which is approximately a five per cent solution, used to add to the ordinary oxalate bath. The prints must be made fairly dark, much too dark in fact if the negative is very thin, and then should be developed in a saturated solution of oxalate to each ounce of which from two to sixty minims of the bichromate solution have been added. The prints are transferred to acid after development in the usual way.

ARTISTIC LIGHTING.

This most famous of all books written for photographers has been reprinted, and we are now in a position to supply orders. Any photographer who has never studied this book has yet to learn the A, B, C of lighting. Once this book has been mastered, it is very easy to understand all other schemes of lighting. Send 50 cents to The Photo-Beacon Co. and the book will be sent by mail.

WHAT MAKES A MASTERPIECE?

In a picture of such quality as to be acclaimed a masterpiece, certain constant factors are discoverable. We find that there is an unequivocal unity about all great work. Though its parts be myriad, they have jointly and severally an imperative relation to a dominant, absorbing and irresistible central idea. Everything in the picture points to it, or suggests it, or echoes it; it is the

focus in which all the energies of the picture converge. The lights and shades, the lines and masses, the tones and values of the whole, are adjusted in such a way as to coerce the eye and mind to rest on, and to compass, the master theme. There is no possibility of escaping the artist's intention; he has ordered everything so that the beholder can not stray beyond the frame: so that no question can arise which the



Eugene Hutchinson,

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canvas or the print will not answer categorically and fully for the man of culture and acumen. In fine, everything useless is eliminated, and everything worthy of retention is employed to exalt the supreme concept.

Work of this kind, whether photographic or other, is justly entitled to classification among the "fine arts"; and there is no valid reason why the camera should not be a most valuable instrument of the highest art.

It is forbidden, except for a distinct purpose, to place the principal object in the geometrical center of the space — for the reason that such position suggests radial lines diverging to infinity, thus depriving the principal object of its rightful dominance. The center is the position of quiescence, not of action; of weakness instead of strength. Assign to your chief object a place in one of the quarters of the space; and so connect together all the points of interest that the eye will be led naturally throughout the picture and will be brought to rest on that which has the highest claim to attention.

Much has been written about the proper forms and boundaries of a picture; but a moment's reflection will suggest mural decorations of all forms, and all equally meritorious — spandrels, lunettes, ellipses, ovals, circles, foliations, triangles, and mere ribbons or narrow panels, not to try to catalogue the endless variety of irregular spaces that occur in architectural designing. Each space calls for special treatment, but the same principles are involved in all cases.

The photographer is not barred from any field of composition he may elect to enter — from the simplest of decorative designing to the most elaborate historical subjects; but if he expects to attain eminence, he must conform to the laws of unity, coherence, coördination and harmony, by which all artists are governed. More than all else, he must be possessed of a worthy idea and endowed with that high imaginative faculty which alone can give true vitality to a graphic idea.

SPECIFIC RULES.

Avoid centering your principal object on the plate.

Chain together the related parts of the picture, and avoid detachment and scattering of series of pictorial elements. Keep the lights connected and the darks coherent, making two series of values consistent throughout the scale or key chosen for the work.

Remember that the lights and darks of a picture must be in equilibrium, and that a small mass of deep black will counterbalance a large expanse of white.

Preserve the extremes of your gamut — the deepest black and the pure white — and employ them in nice opposition to gain supreme effects.

Avoid straight lines where you can employ curves; and do not suggest that the skeleton of your picture is made up of straight lines if you can intimate that the basic lines are curved. So arrange your principal masses that the eye will perforce traverse curvilinear paths in compassing the subject.

Avoid repetition of lines, masses, contours, tonalities and values, except in positions of great importance. The artifice of repetition is one of the most powerful organs of graphic art, and it should be reserved for the climax, not frittered away in trivial situations.

If you wish to intensify the effect of a curve, remember that it may be done by the use of a rigid straight line as a foil. Conversely, where a straight line is needed to give a sense of strength, the effect may be heightened by a clever juxtaposition of a suitable curve. Use right lines sparingly in arrangements.

Keep the center of gravity low enough to suggest stability, unless your object is to express the contrary state of things — instability.

Do not let the principal object seem to be leaving the picture, except as a clever and effective device to express an idea of transition, in which case it becomes one of the potent agencies of dramatic artistry. In general save your points of entry and emergence, as you do your deepest blacks and your straight

lines, to give emphasis or significance to your symbols.

DETAIL AND SHARPNESS.

The question of detail and sharpness is perennially discussed among photographers without much profit. The safe

down the lens for the sake of obtaining sharpness and definition, which is neither essential to the record nor pleasing to the æsthetic sense. Flesh is plastic, mobile and vital; to represent it as one would iron or marble, is utterly false and atrocious.



Eugene Hutchinson,

"AT HOME" PORTRAIT.

Danville, Ill.

rule seems to be that the picture should be critically sharp, if possible, without prejudice to the idea sought to be conveyed. In the rendering of a head, it is worse than folly to labor and stop

The flesh is made up of fibers and cells, and the skin has pores: but these things are of interest to histologist and anatomist, not to artist. It is well to manage your lens in such a way as to

avoid critical detail in all portrait work. Even in the most technical work, universal detail is a defect rather than a merit, though specific detail is highly essential. For example, if you are trying to make a picture of a car truck, you will want everything about it keen and sharp. The purpose of the picture, however, will in no wise be enhanced, if, by excessive stopping down, the trees in the distance are rendered equally sharp, thus compelling the eye of the observer to wander from that which is essential to a mass of irrelevancy.

It is well to remember that there is no device more efficacious in arresting than a clearly localized area of sharpness; hence the use of detail must be made a study, just as we try to reduce the tonal gamut to a science. The eye will pass over indistinct images, and will rest on the minutest area of critical sharpness; therefore, be careful that the sharpness coincides with the essential, not with the trivial.

The camera-maker makes provisions for the needs of the worker in this respect by means of the rising and falling lens board, by vertical and horizontal swings, and by elongation of the bellows. The lens-maker, too, in furnishing iris diaphragms, gives the photographer great control over the distribution of sharp definition. Care is required in the use of all these adjustments; but within the limits of allowable distortion, they afford means of pictorial grace which no worker should — though most do — ignore.

Finally, the utmost ingenuity and imagination are required in the proper marshalling of symbols and analogues, whereby the purpose of a picture is made unmistakable to all who see it.

These hints cover the principal points which should be remembered by the camera worker in arranging his picture. If they are fully obeyed, and are coupled with proper technical skill on the part of the worker, they will yield satisfactory and meritorious photographs in every-department of the craft.

LOUIS A. LAMB,

Editor *Pitt & Post*.

DEFECTS OF CURRENT EXPOSURE METERS.

The exposure meters in current use are based upon the assumption that different light intensities will chemically affect a bit of sensitized paper in the exact proportion as they will chemically affect the sensitized plate. This assumption is unwarranted, from the fact that the plate and the paper have quite different coefficients of inertia, and, as employed, these different inertias have sufficient effect to vitiate the practical results.

To illustrate this, let us assume that 100 represents the intensity of a given light and that 10 represents that of another light. The ratio of their respective intensities will then be as 10 is to 1. Assume that 1 represents the coefficient of inertia of a given plate. Then, under the above lights, the chemical actions on the plate would be as 100 less 1 is to 10 less 1 — as 99 is to 9, as 11 is to 1. Let us now assume that a bit of the sensitized paper is only 1-125 as sensitive as the plate. It will then be obvious that its initial resistance to light action will be much greater than that of the plate, which is the same thing as saying that its coefficient of inertia is much greater than that of the plate. Now it would not be true to assume that these inertias vary as the sensitive ratios of the plate and paper, or as 125 to 1. But let us assume that, by a critical and careful experimentation, we find the ratio of the inertias to be the cube root of the ratio of their sensitivenesses, i. e., as 5 is to 1. The mathematical reader will agree that whether this experimentation would give the cube or some other root does not affect the principle here expounded.

We will now tabulate results:

	First Light.	Second Light.	Ratio.
Light intensities.	100	10	10:1
Plate inertia....	1	1	
Chemical effects.	99	9	11:1
Light intensities.	100	10	
Paper inertia....	5	5	
Chemical effects.	95	5	19:1

We note by inspection of the above that the paper test would call for 19 times more exposure for the lesser light than for the greater, while the plates would call for only 11 times more.

But the above is not even a sufficient test. As a matter of fact, photographers are compelled to work under lights varying much more than 10 to 1, and it is probable the ratio of inertias between the plate and the paper will exceed the ratio of 5 to 1. It hence follows that in actual practice, with greatly varying lights, the meter will give the photographer very erroneous results. It is true that one may get negatives of more or less value by employing a current meter under quite a diversity of lights, but then dependence must be had in the latitude of the plates, and in the modifications of development, and if at last we must depend upon these we had best at the start "guess off" the exposures. Let the man who questions the foregoing do this: Let him make a series of timed exposures under a bright light and the same under a dull one. Keeping a record of these, let him also record his meter readings under the two lights. Let him develop with a normal developer and in the same time all of his plates. Let him then select the best negative under the bright light and the best one under the dull light. Upon referring to his notes he will find that the difference of time of the selected plates will be much less than that given by the meter.

If the meter manufacturers are to give us an instrument that is scientifically correct, and really satisfactory in practice, they must do more than they have yet done.

The inertias of the usual fast plates do not materially differ. The inertias of two plates whose speeds are represented by 1 and $1\frac{1}{2}$ would be quite inappreciable. Therefore, let the meter makers take an average brand of plates and laboriously experiment with them in the camera in the different lights, and at the same time keep the records of their meters. In this way they will be enabled to develop by empiricism a list of fractional factors with which to

modify the meter readings for the different lights. This list of factors could then be applied to the face of the meter, to be used by the photographer as indicated in the directions.

There is yet another defect of meters as now furnished. I have never seen (except in print) a paper that would at all times pass through the same tints, i. e., would always match the standard tint. I am of the opinion that no such sensitized paper can be chemically produced, as the aberrations are due to the different conditions of the atmosphere, which, of course, is beyond our control. This, however, might be done: The aberration of the tints, in my observation, is not over three—bluish, greenish and purplish—and it would seem quite practicable to supply the standard test in these tints side by side. The eye would then have no difficulty in catching the one that matched.

GASTON M. ALVES.

FLOWER AND PLANT LIFE.

For such work, particularly for the smaller plants *in situ*, a low point of view should be chosen, and if it is possible to use the camera stand without setting it up to its full extent, and spreading the legs out wide, this should be done. A friend with whom we have been out this week dispensed with his stand altogether and used a wooden box, 6 inches high, 12 inches broad, and 18 inches long, and having screw holes on each side and at one end, he tackled every subject we came across, and the only other precaution he took was to have a bit of mackintosh cloth on which to kneel on the damp ground, so as to avoid the back-breaking operation of stooping. No difficulty will be found as regards movement if a large stop be used, and for branches a little patience will get over the difficulty if there is much wind.

DON'T forget to send in your prints for the Second Historical Competition. Remember the test is a purely technical one. All prints must be received by June 30.

BURKE & JAMES RAY FILTER COMPETITION.

The rules for this competition have now been formulated. Two classes have been formed, with eight prizes in each, these running from \$20 to \$5. Class 1 is devoted to landscapes, with cloud effects; Class 2 is devoted to flowers, draperies, paintings and miscellaneous. The contests will close on November 1, 1905. Full particulars may be had on application to Burke & James, 118 West Jackson boulevard, Chicago.

The same firm, as will be noticed in our advertising pages, has recently introduced a very convenient device for the development of roll film, which they have entitled the "Ingento Developing Tank," which should prove to be very popular.

It will be of great interest to all photographic workers, as well as to dealers in photographic supplies, to know that the New York office of the G. Cramer Dry Plate Company is distributing to all dealers, this spring and summer, very beautiful samples of work on its plates. These prints are made from negatives by the foremost workers in the country and are of great pictorial value as well as plate quality. We mention a few of the most prominent makers of these negatives, as follows: Mrs. J. E. Bennett, winner of the grand prize at the St. Louis exhibition; Mr. Curtis Bell, president of the American Federation of Photographic Societies; Mr. Rudolph Eickemeyer, Jr.; Mr. J. H. McFarland; Mr. Harry Hendrickson; Mr. Pirie MacDonald and Mr. Henry Troth. It is of interest to note that all these prominent workers are constantly using Cramer plates. In addition to the names mentioned above, Mr. E. B. Core, the children's photographer of New York, has made for the Cramer Company a set of fourteen negatives of a little boy, which are taken with a very short exposure and show excellent results. Mr. Core has used the Cramer Crown Plates exclusively. Mr. E. L. Somerville, the manager in charge of the Eastern terri-

tory for the Cramer Dry Plate Company, has collected these negatives, and he has at their New York city address a complete display, which is very interesting.

TANK development has within the last year become very popular with many professional photographers, because it is a great time-saver and produces first-class negatives. Those who are contemplating to develop by this method would do well to investigate G. Gennert's "Auto Tank," which is designed specially for tank development. It consists of an oblong zinc box, with a cover, and contains a zinc grooved rack specially constructed to carry different sizes of plates and fitted with hinged metal handles by which the rack is raised, lowered or suspended in the tank. The prices are very reasonable, being \$2 for all sizes up to 5 by 7, \$2.50 from 4 by 5 to 5 by 8, \$3 from 4 by 5 to 8 by 10. Complete descriptive circular will be sent on application to G. Gennert, 24 East Thirtieth street, New York, or 23 Lake street, Chicago.

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Roxbury, Mass.

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WHAT TO PHOTOGRAPH.

A fairly long experience with amateur photographers has taught me that the average individual does not consider his photographic season to commence until the Fourth of July, when he turns out his outfit either to make photographs of the events of the day or on an outing to some favorite resort. From that time on he is in full swing, and, as far as I can judge, his great problem all summer is, what to photograph.

It is therefore opportune at this date to make a few suggestions. In the first place I would advise that each camera user get firmly planted in his mind one idea, namely, that he is not going out to look for subjects as subjects, but that he is looking for a subject to express some abstract idea or some quality that may exist in connection with a subject. For instance, during the hot summer days let him try to render sunshine, and I can assure him that it will take him all summer to produce even one picture that will convey this sentiment, for I think I could count on my fingers all the paintings and photographs I have ever seen that portray a good, hot, sunshiny day. Or one may go in for a rainy effect, or mist, or sunrise, or sunset, and so on. Another might feel more sympathy with such conceptions as youth, old age, strength, weakness and so on.

If these suggestions are not congenial one may take up another line. While simply an amateur the congenial sub-

jects to me were those that portrayed common people at work, and all my medal pictures belonged to this class. I suppose the real reason was that I was raised in a little country village and always had been more or less interested in the village blacksmith, fishermen and farm laborers. I never have any difficulty at all in getting in touch with such people, and I am certain that if ever I started out to make a salon picture, I would in the most natural way in the world select some such subject. Other men that I know of concentrate their efforts on country roads, while others wrestle with waterfalls. One Chicago amateur finds his inspiration in the sky line of our big buildings with either the lake or the river in the foreground. And so on it goes; if one desires to make a real success in the picture world he must take up a line of subjects that are congenial to him and by steady application work out the underlying sentiment that is to be found associated with them. The mere looking for pretty subjects will very rarely score a hit.

F. DUNDAS TODD.

THE largest efficient telescope in the world is to be added to the equipment of Harvard University. The new instrument is 27 feet in focal length and has a 5-foot aperture — nearly twice as large as the Lick Observatory telescope, which has a 36-inch aperture. The telescope will be used chiefly for photographic work.

PROFESSIONAL PORTRAIT COMPETITION No. 17.

At the last meeting of the minor convention that I referred to recently as meeting once a month in Chicago, after a careful examination of many portraits that I submitted for the consideration of the members it was the unanimous opinion that there were three things that photographers needed to study very closely and to keep in mind while they were making a portrait. These were spacing, line and tone value, to which a fourth must ultimately be added, consideration of the mount on which the print is to be presented to the public. At first many of the members thought that I was an enthusiastic admirer of fuzzy pictures, and it took months to get it clearly into their head that the one thing above all others that I was striving for was tone quality, but now I think they seem to understand my position and the problem set the members for the next meeting is the production of portraits with the best tone effect each individual can make. One very interesting point turned up at the last meeting. One photographer presented a portrait of a lady taken by a window and it was condemned by all the others because of the lack of quality in the shadows. The window happened to occupy a very large part of the area of the print; when, however, more than three-fourths of it was covered up, the shadows of the figure looked very fine indeed and I think this practical illustration did more to educate the eyes of photographers present than all the talk that had occurred at our previous meetings. One member who had come fifty miles to the meeting said that this one point had taught him more than his attendance at half a dozen regular conventions had done.

As the outcome of my experience with these gatherings I hope to be able, at an early date, to formulate quite a series of subjects for study for these competitions, and I ask suggestions from my readers during the ensuing month, so that the program may be as complete as possible. So far we have

taken up the following subjects: Dark line lighting—that is to say, a profile with a narrow black line running along the brow, nose, lip and chin; light line lighting, in which a light band takes the place of the dark one on the profile; artistic lighting, better known to photographers as Inglis lighting; study in tone values; double mounting. These of course will be added to, but I am desirous of having suggestions from my readers, and once I have about a dozen I will outline a scheme of competitions for a year, so that readers will have something definite to work for each month.

This month's awards are:

First prize—E. E. Godfrey, Waukegan, Illinois.

Second prize—J. W. Ward, Conneville, Pennsylvania.

Third prize—J. Borry, Thief River Falls, Minnesota.

I recently had the pleasure of meeting Mr. Godfrey for the first time and found him to be a young man considerably under thirty years of age, and I was delighted when he told me that taking part in these competitions had resulted in very rapid development in the quality of his work, but this is getting to be an old story to me now, because every steady competitor has the same tale to tell, and if photographers were really as anxious to improve in their work as they say they are I would be deluged every month with portraits for this competition. The first thing that attracts my eye in the first-prize portrait is the fine feeling of solidity that pervades it everywhere. The cause, it seems to me, is twofold: First the body is slightly turned away, and we thus see the perspective lines of the yoke of the dress, the waist band and the termination of the sleeves. Most important of all, however, is the lighting, which gives very fine modeling to both face and body. If we cover everything but the head we find it looks solid, so that Mr. Godfrey did not depend upon lines to get the perspective. While speaking of lighting I would draw attention to the line of white underneath the chin.

because it carries a good lesson that is worth remembering. It is a secondary light, but is not an offense to the eye for the simple reason that its source is

source is not indicated; but here we find it is all right to have a secondary light if we also see the source.

Mr. Godfrey, it is evident, has mas-



Negative by E. E. Godfrey,

Waukegan, Ill.

FIRST PRIZE.

shown. I frequently notice secondary lighting on portraits, especially in the eyes, due to the use of reflectors, which are always jarring to me because the

tered the principles of spacing, and one can only admire the variety to be found in this portrait. I am especially interested in the very clever way in which he

holds inside the print the patches of white on the right side of the picture. In the one case it is stopped by the hair and in the other by the sleeve of the dress. The background is about right, being a middle tint between light and dark, and so makes harmony out of a very contrasty subject.

The second-prize picture is by a photographer who long ago gave me proof that he is possessed of very excellent taste in tone, and this print is in harmony everywhere, with the possible exception of the margin, which, unfortunately, is cut on the bevel rather than square, and so makes a decided white line on the two sides of the print on which the light happens to fall. This is unfortunate, because he has been particularly judicious in the selection of his mount, the color of which consists of two tints of the same color as the print.

I rather like the way the light fades on the skirt. It is very gradual, but at the same time it concentrates the eye on the face and on the furs, these being very important, I have no doubt, to the wearer. This portrait is altogether a very happy illustration of how a photographer can make a good likeness and at the same time satisfy the customer's natural desire that the dress should be well rendered. The fine tone value and the happy angle of the muff is where the photographer got in the little touch of satisfaction to himself and made his work a pleasure instead of a toil.

The third-prize picture is an example of very fine technical skill. The lighting of the face is almost perfect, the spacing is very simple, being suited to the subject. The background is just what it ought to be in tint to harmonize everything. Yet the general effect is unsatisfactory in the original, simply because of the color and tint of the card on which it is mounted. It is a very light gray, and thus intensifies the low tone of the scheme of lighting. Photographers must learn that the mount is a very important part of their work and that it deserves at their hands just as much consideration as posing and lighting. I think I am not

exaggerating when I say that nine-tenths of the prints that come in to me in these competitions are mounted without taste.

BRIEF MENTION.

White.—Very ambitious, but too dead in tone, background being too dark.

Crandall.—White face, dead black background, 3-16 of an inch white margin, gray mount, make a bad combination.

Pleas.—Mount far too light.

Hage.—Fine tone value in face, clothes and background; mount just right: spacing in upper part excellent, but the lower part is spoiled by the right arm and chair. Trim one inch off bottom part and three-quarters off the right.

Van Fleet.—Grouping good, but the figures are all bunched in the lower part, due to seat being too low.

F. DUNDAS TODD.

RULES.

1. Only one print to be submitted in any one month, and this must be from a negative made in the ordinary course of business within sixty days of the date it was mailed.

2. The pictures will be judged on the first day of each month, and all prints received prior to that date will be included.

3. Requests for private criticism, accompanied by fee of \$1, may be sent along with the print and will be answered after the judging is over.

4. Mark outside of package with the words "Portrait Competition."

5. Prints are not returnable.

DRYING ENLARGEMENTS.

Bromid enlargements and other big prints are often hung up to dry by means of two darkroom pins stuck through the two top corners. When this is so, the paper should always be allowed to sag a little between the two pins when fastening it up. If not, it may contract on drying to such an extent as to come off the pins and fall to the floor, or, at any rate, may tear badly.

PICTORIAL COMPETITION No. 86.

While this competition is not a popular one it is one that gives me very considerable pleasure, as I have frequently said its purpose is to draw the emphatic attention of my readers to the subject of spacing, which is now recog-

nized as being one of the fundamentals of composition—the great Japanese contribution to the art of the Western world. In the early contests the pictures submitted were very unsatisfactory, but of recent years quite a number of readers have developed great



Negative by J. R. Igllick,

Rochester, N. Y.

SECOND PRIZE.

skill and taste, and so I derive much pleasure from the study of the prints.

The judges made the following awards:

First prize — James Thomson, 2 Mascoma street, Roxbury, Massachusetts.

Second prize — Joseph R. Iglick, 29 Asbury street, Rochester, New York.

Third prize — W. H. Porterfield, 100 Lakeview avenue, Buffalo, New York.

There is little to be said in the way of criticism of these prints, and so I will content myself by asking my readers to remember its purpose and to spend some little time studying the various spaces, principal and minor, large and small, into which the paper is divided.

F. DUNDAS TODD.

FUTURE COMPETITIONS.

Competition No. 88 — Genre pictures, or pictures that tell a story. Closes July 31.

Competition No. 89 — Branch of a tree with leaves, with special consideration of decorative effect. Closes August 31.

Competition No. 90 — "At Home" portraiture, that is, portraits not made in a studio. Closes September 30.

Competition No. 91 — Snap-shot pictures. Closes October 31.

Competition No. 92 — Landscapes. Closes November 30.

Competition No. 93 — Flower pictures. Closes December 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the sender's name and address, *but nothing else*. The outside of the package in addition to our address, may bear that of sender. Accompanying a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given; also the printing process.

2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

3. Prints are not returnable.

PRIZES.

First — Books to the value of \$5.

Second — Books to the value of \$2.50.

Third — Books to the value of \$1.

Any books, on any subject, or if preferred, any article we can buy in Chicago.

LUMIERE PLATES.

From the Lumiere N. A. Company, Burlington, Vermont, where is located the American factory of this renowned French concern, we have received samples of six brands of dry plates manufactured by the firm. Our test subject is a country home with foliage around, on which may be found nearly all the colors of nature excepting red, and at a particular hour of the day it so happens that all these different colors are there in both light and shade. During the spring and early summer months, Chicago is apt to be treated to cloudy days at the very hour we prefer for our test, and this was our fate on the two days when we tried the Lumiere plates on this subject, but while we would have preferred other conditions, the results gave us a fair estimate of both the speed and the quality of the plates.

At the World's Fair, St. Louis, we were very much impressed with the very fine quality of the Lumiere plates on exhibition, and it was very gratifying to find that in our hands the samples gave just as excellent results, and we had no difficulty at all in securing fine gradation and density with every one of the brands tried, while even with the orthochromatic there was no trace of fog; and we certainly did expect to have a little trouble with the Panchromatic C, which, as its name indicates, is sensitive to all colors, including the red, but by covering the dish and developing entirely by time we got very fine negatives. The following speed ratings will be found correct for bright sunlight in midsummer between 10 and 2, with stop f/8, on ordinary landscape subjects:

Sigma, 1-100 sec.; Ex. Rapid, 1-80 sec.; Medium, 1-10 sec.; Ortho. A, 1-80 sec.; Ortho. B, 1-80 sec.; Panchromatic C, 1-50 sec.

**REMINISCENCES AND RAMBLING
RECOLLECTIONS OF EARLY
PHOTOGRAPHIC TIMES.**

EMBRACING A PERIOD FROM 1839-40, ETC.

CHAPTER V.

Mr. Hart, of Glasgow, reminded Mr. Stewart of our promise to visit him, but it so happened that Mr. Stewart was just starting on one of his business trips, so he insisted that I should take the opportunity and go alone, apologizing for his absence. I had a very pleasant time with the old gentleman, and he showed me over some of the principal parts of the city of Glasgow, as he wished to draw my attention to its rapid growth and the many wonderful changes that had taken place since his young days. In our rounds we paid a short visit to Dr. Paterson, and he made many inquiries about my photographic efforts. I told him what I had been doing, and he remarked that I was on the right lines to improve. We had a view of some of his latest remarkable productions, but as we saw he was very busy we soon left.

Going down Queen street and passing along toward Buchanan street, at the great Royal Exchange building, Mr. Hart stopped and remarked, "Where we now stand, when I was a boy, all this square was a fruit orchard, and I used to come to a tree just here and fill the front of my kilt with fine apples." Gordon street, Sauchiehall street and all along the whole of this district were described in a similar way. He mentioned the interest he and his brother had taken, in its early period, in decorating, etc., the Andersonian University, so well and favorably known by the working mechanics, engineers, etc., of Glasgow. Passing along Argyle street and Trongate, down Saltmarket street to the river Clyde, all along Clyde street, next the river, "here," he remarked, "in those early days were located the mansions and dwellings of the 'tobacco lords' and 'merchant princes' of the city." He remembered when the first bridge across the river was building. All day long it



Negative by W. H. Porterfield,

Buffalo, N. Y.

THIRD PRIZE

was a busy center, and advantage was taken at that time, as labor was scarce, to obtain the services of the soldiers of

a highland regiment, then quartered in the neighborhood and just home from the war. These soldiers, with their undress jackets and kilts, were a great attraction to the children, and a continual procession of nursery maids could be seen out in the forenoons airing their charges and watching the soldiers working in their picturesque uniform. There were no houses to speak of on the other side of the river, nothing but fields and farm lands. Now a great city, built for miles around in solid stone work, with numerous factories and industries of all kinds. When I think of it now, it reminds one of Chicago in some respects.

After dinner at Mr. Hart's home we had a long, interesting conversation, and I was shown many artistic and beautiful curios, one among them was of such thrilling interest that its handling and contemplation was like a touch of inspiration. It was a case of beautiful tools of various kinds sent as a gift to Mr. Hart from his old and respected friend in Birmingham, James Watt. When reading the letter which accompanied the gift, written and signed by the great, deep-thinking philosopher, I felt as if in touch and not far removed from the presence of him whose great mind conceived and whose mathematical knowledge enabled him to be the improver and inventor of the practical steam engine, with its many accurate motions and movements, that have been the guide of engineers to the present day — one of the greatest benefactors of humanity which has brought the ends of the earth so near that all nations may be considered neighbors, not to speak of the industries developed into unison with human requirements. My time for leaving had arrived, so we parted after spending a very enjoyable day.

Glasgow, in the remembrance of that one citizen then living, had grown and prospered by the enterprise of its citizens along with the unique management and devotion of its municipal authorities, devising superior methods of handling, as well as purchasing for the

city, from corporations and private owners, all or nearly all the utilities, so that the city owns and works them *on a paying basis for the use and benefit of the people*. Glasgow, the cradle and nurse of the steam engine, the cradle and nurse of the steamboat, one of the greatest shipbuilding centers of the world. The writer remembers having seen a ship of six hundred tons burden at the Broomielaw, being prepared to carry emigrants to America, and it was considered then quite a feat to get a ship of that size so far up the river, it being shallow there. By the persevering and enterprising labors of the authorities and Clyde Trust, the river has been dredged and deepened for over thirty miles to the sea, and is able to allow the incoming and outgoing of the largest ocean steamships afloat.

Then there are the magnificent dock accommodations, with the many wonderful hydraulic appliances, steam cranes, etc., with power to lift and move the largest machinery and steam boilers made. The municipal management of the utilities of Glasgow has been the envy of many cities of the world, as well as writers, and it holds the proud position of being the second city in the British Empire.

It has reared and supported many good and high-class photographers, but that has been after the year 1852. Prior to that, during the silver plate period, there were few in that town, as elsewhere. Now the numbers are so great that it would occupy the space of a big book to describe them.

I had now reached a point that impressed me with the idea that to enjoy photography to its full extent it became necessary to have some knowledge of four essentials of importance, namely, general and photographic chemistry and optics, its mechanical appliances, and above all the principles and canons of art. To these I therefore devoted some attention and study. I knew Mr. Thomas Davidson, optician, Castlehill, Edinburgh (Scotland), and commissioned him to make for me a good photographic lens, suitable for portraits

and landscapes, as might be required. A camera to work with the new lens was wanted, so I made a sketch and gave it with instructions to a local

and experimenting was indulged in. Frequent interviews with Mr. Davidson, and conversations on optical matters were interesting, his views on lens



Negative by J. W. Ward,

Connellsville, Pa.

SECOND PRIZE.

cabinetmaker. When the new lens and camera came to hand I considered myself equipped for better photographic work. Each turned out satisfactory,

combinations and sets for various purposes impressed me favorably—time only convinced me more—of the correctness of my early impressions of

Mr. Davidson's superior knowledge and correct principles of what was the best combination of lenses for certain kinds of photographic work. About this time opticians were getting busy in various countries, studying and making lenses for photographic purposes. It was known that the mathematician, Professor Petzval, of Vienna, had made calculations for a photographic doublet—the well-known Petzval portrait lens—which was copied and used as a guide for many opticians, as the optical system was different from any previously constructed and could be used with large apertures for rapid exposure. Austria, Germany, France and other continental countries had their opticians turning out photographic lenses in great numbers at high, medium and low prices, while opticians in Great Britain were not behind. Ross, in London, with whom the elder Dallmeyer was associated, afterward in business for himself, both of these opticians devoted their talents to improvement in their optical instruments and turning out the best work they knew how, becoming famous for their photographic lenses the world over. Some of their employees starting in business for themselves, have been specially successful over many years. Then we had Davidson, in Edinburgh, also Thomas Grubb, in Dublin, Ireland, who was equal to the best of them, whose lenses I knew and have seen at work, and consider them equal to the best productions of Voigtlaender, Ross or Dallmeyer, and those possessing them would not substitute for them.

No doubt those opticians who excelled have been specially careful in selecting the best optical glass procurable, as well as correct calculations and workmanship in their particular line of manufacture, and had the happy faculty of giving a decided individuality to their work. This I have always admired, in contradistinction to the practice and inclination of some to turn out photographic pictures by the thousand so like each other that no individuality exists, and all interest is lost.

About the period we are now considering, conditions were somewhat different. We had in Edinburgh two or three professional photographers, with two of whom I was acquainted, McMillan and Thomson. They worked the silver-plate and Talbotype processes for some time, then McMillan left and Thomson became associated with Mr. Ross, and the firm then became Ross & Thomson, so long and favorably known in the photographic world. Their Talbotypes by the albumen process were considered by the best judges in Scotland, England and France as the finest and best photographic views that had been seen, as artistic productions, with marvelous aerial perspective and exquisite details, never before equaled and not surpassed even to this day.

PETER DOW.

(To be continued.)

I HAVE been in a good many dark-rooms in my time, amateur, professional and trade, and there is just one thing that I have seen almost everywhere. It is a little thing, but I think important. When a negative or print is fixed or fixing, I have seen it lugged out and held up to the light, dripping hypo over the floor, and everywhere else, with the result that the droppings on the floor dry up, and the hypo crystallizes and is sent flying all over the room the next time you happen to walk over it. This makes for trouble. I keep a box full of absorbent cotton wool, and when I want to pick a negative or print out of the fixing bath I pull out a pledget of cotton-wool, lift my plate or print, let it drain a minute, and then rest the lower corner on the cotton-wool; this catches all drippings and saves the floor, etc. It is a simple dodge, and worth trying. You can use blotting-paper, if you like, or a card, or a cloth, or even the palm of your hand.

A too strong high light in a negative may be readily reduced by rubbing it with a piece of chamois leather or canton flannel moistened with alcohol.

PHOTOGRAPHERS' ASSOCIATION OF AMERICA.

From the secretary we have received quite a long circular regarding the Boston meeting, which is to be held from August 8 to 11 in the Mechanics building, Huntington avenue. From the particulars given it is evident that the officers have been successful in securing a very spacious and convenient accommodation so that there ought to be every comfort during the meeting.

"The Reception Room," by Charles W. Hearn.

HOTEL ACCOMMODATIONS.

(All on the European plan.)

Hotel Lenox, official headquarters, \$2 per day.

Hotel Thorndike, \$1.50.

Hotel Brunswick, \$1.50.

Copley Square Hotel, \$1.

Hotel Nottingham, \$1.

Hotel Oxford, \$1.



CHICAGO CAMERA CLUB.

This photograph by Mr. Edwards, one of the members, was made by the light of an ordinary arc light in the ceiling. Exposure 1 min., with stop $f/11$ of a 10-inch lens on 8x10 plate.

The program consists principally of art talks, as the following titles will show:

"Photography; Its Recognition as a Fine Art and a Means of Individual Expression," by Mr. Thomas H. Cummings.

"Practical Art Lessons," by Otto W. Beck.

"A Plea for Good Taste and Common Sense," by Sidney Allen.

"The Art of Elimination," by Frank A. Bement.

TRANSPORTATION.

All members east of the Rocky mountains can, by using the certificate plan, get a rate of one and one-third fare, while all those west of the mountains may either pay the full fare to the nearest certificate point and there get a certificate or, if cheaper, they may avail themselves of the regular nine months' rate, which is at present in effect. As certificates are not always kept at small stations, it will be advisable for photog-

raphers to notify the local agent a few days in advance.

PAYMENT OF DUES.

To avoid the crush at the hall door, members are requested to remit their dues of \$3, if now a member, or \$5 if joining for the first time, to the treasurer, F. R. Barrows, 1873 Dorchester avenue, Boston, Massachusetts.

Further particulars will be sent on application to the secretary, J. M. Bandtel, 447 Eleventh street, Milwaukee, Wisconsin. After August 1, his address will be Mechanics building, Boston, Massachusetts.

A PLEA FOR THE BLUE-PRINT.

It has always appeared to me that the amateur has wilfully passed by a very charming process in throwing over the blue-print. Nine-tenths of the amateurs would reply, if asked why they make so few blue-prints, "it is so cheap and horribly blue." In a measure they are correct, but only so far as the commercial paper is concerned. But one cannot justly condemn a process simply because the product of our manufactures is not altogether satisfactory. I do not intend to convey the idea that all commercial brands are poor; few of them are, but when one uses paper of his own manufacture the difference is very marked. This comparison explains one important point, namely, freshness of the paper, and the beauty of this process depends greatly upon this one word. The great uncertainty in procuring absolutely fresh stock of the dealer and the poor quality of prints made upon stale paper is undoubtedly why so few good blue-prints are contained in our collections.

I have done considerable experimental work in connection with the ferro-prussiate process, and my experiments invariably show that to make a first-class print the paper must be used soon after manufacture. This may be disputed, and many amateurs may say that they have made good blue-prints upon paper months or even a year old. But let that amateur prepare his own paper,

printing the same day manufactured, and compare the quality with any commercial article. The great superiority of the home-prepared product will open his eyes and he will likely find many uses for this much belittled method. Another reason why the boughten paper is unsatisfactory is the lack of variety in the support. In other papers we have heavy smooth, heavy rough, and so on, but the blue-print paper comes in only one grade, and that usually not of the best. Quite likely the low price of this product prohibits any but the cheapest support being used.

But this need not discourage the tyro from trying this process, which is almost as simple to prepare as it is to fix the printed image. The formula that has given me entire satisfaction is:

Ammonium citrate iron...	100 grains
Water	1 ounce
Ferricyanid potassium....	64 grains
Water	1 ounce

Dissolve the two chemicals in cold water and put each in a separate well-corked bottle. They will keep for months in a dark place, though if mixed they deteriorate rapidly. For very rough papers it is desirable to first size the paper with arrowroot, one-half ounce, hot water to make twenty ounces. Gently boil until clear. To coat the paper equal quantities of each solution are put in a saucer or other convenient dish and with a bit of cotton (inserted in the mouth of a small bottle for handling) well moistened with the sensitizer, go over the paper with broad rapid strokes, first across, then up and down. This will insure the even distribution of the solution, upon which the quality of the finished print depends. After coating move rapidly back and forth over a lamp until dry. The paper dries rapidly, and I have coated and made many prints in half an hour. The coating and drying of the paper must be carried on by lamplight.

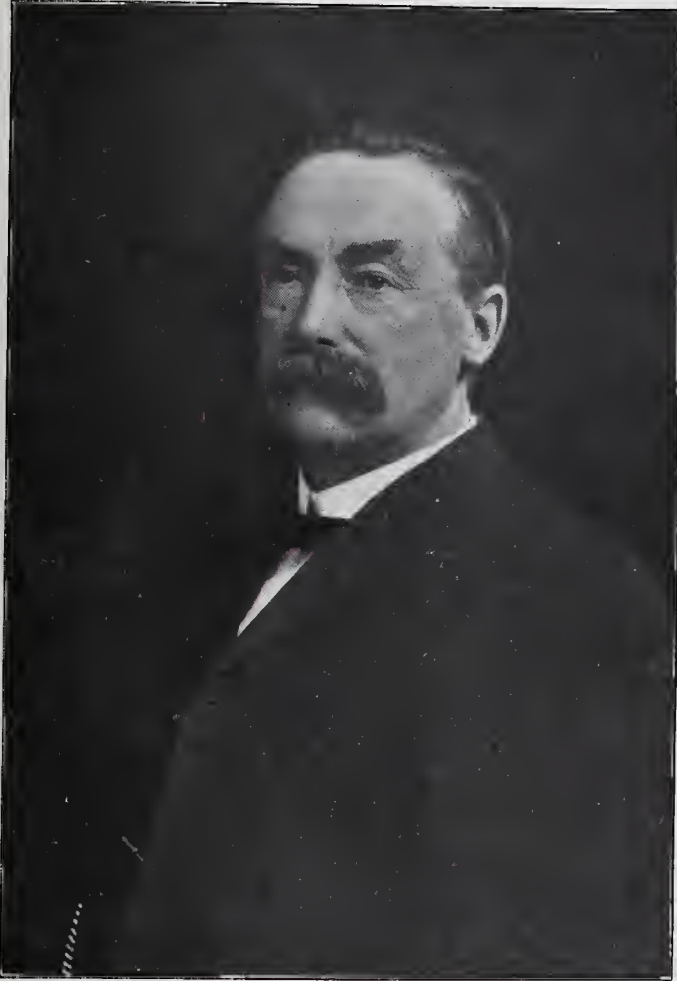
For a proofing medium and for cataloguing stored negatives by means of prints, this process is an ideal one, combining as it does permanency with great cheapness. CHARLES S. TAYLOR.

INTENSIFICATION AND REDUCTION OF THE NEGATIVE.

(Read before the Royal Photographic Society.)

Probably the best definition — said Mr. McIntosh at the outset — that one could give of the various processes for

such treatment would make a faulty negative as good as one that had been correctly exposed and correctly developed. Many beginners would be much more profitably employed in learning how to expose and develop correctly



Negative by J. Borry,

THIRD PRIZE.

Thief River Falls, Minn.

intensifying or reducing a negative was that they were methods for making the best of a bad job. A really perfect negative required neither intensifying nor reducing; and it should be the aim of the photographer to produce negatives which needed no doctoring after they were developed, for no amount of

than in learning all the various methods of intensification and reduction — the number of which was constantly increasing. At the same time, a knowledge of a few of the best means of intensifying and reducing the negative was necessary, for even the most expert could not always be sure that a negative,

after development, would be just as required. He would advise the beginner to select four or five processes and master them thoroughly.

He proposed to deal that evening with the different methods which he considered best suited to various cases in which the negative required improvement. Before one could say which method should be adopted in a particular case it was necessary to understand exactly what the faults were that had to be rectified. Most amateurs had heard something of what were termed "graphic curves" in connection with the development of negatives. These were of great importance, but the everyday photographer would probably prefer to have the problems presented in a still simpler manner.

A slide shown upon the screen explained, by means of layers of black dots, how the atoms of silver in the film were acted upon by the light in the case of exposures increasing in geometrical progression. In underexposure, it was shown by the layers of dots, that only the surface, or a very little below the surface, of the film was affected by the light, while longer exposures changed the silver to greater depths. The deposit in the film assumed the character of a number of steps, and a line drawn to touch the edges of these steps would form a curve of double flexure giving the characteristic curve of the plate.

Negatives might be divided conveniently into seven classes. First of all, there were the three ordinary divisions, viz., negatives that were:

- (1) Correctly exposed.
- (2) Underexposed.
- (3) Overexposed.

These might be subdivided thus: Negatives that were—

- (1) Correctly exposed and correctly developed.
- (2) Correctly exposed, but underdeveloped.
- (3) Correctly exposed, but overdeveloped.
- (4) Underexposed and lightly developed.

(5) Underexposed and fully developed.

(6) Overexposed and lightly developed.

(7) Overexposed and fully developed.

(1) A negative that was correctly exposed and correctly developed required no after-treatment. Correct development meant getting just that density which could give the range of gradation required for the particular printing process to be used; at the same time it was to be noted that the darkest pigment that could be put upon paper would not be anything like as dark as the deepest shadows in nature. Photographic paper would record only a small range of tones between black and white. Ordinary P. O. P. was said to have a range of about 30 tones; but of course, the different kinds of papers varied. It should be the object of the photographer, when developing a negative, to get such a degree of contrast that every tone in the original subject would be found in the negative. With regard to the degree of density of the negative as a whole, that depended upon the printing process to be used; but, in a general way, a really good negative would give good results with almost any printing process.

A negative, correctly exposed, but underdeveloped (2), would require building up or intensifying in regular proportion throughout the whole range of gradation. There were many methods by which this could be done; a very satisfactory one was as follows:

Immerse and bleach the negative in a saturated solution of mercuric chlorid containing one-half per cent of hydrochloric acid. Wash the negative in a one-half per cent solution of hydrochloric acid; wash in plain water, and then blacken in a solution, as under:

Formalin	34 minims
Sodium hydrate	10 grains
Water	4 ounces

Allow the plate to remain in this bath until the image is well black, and then wash very thoroughly.

A correctly exposed, but overdevel-

oped negative (3) requires to be reduced proportionately throughout, and, as far as the lecturer knew, the only agent that would do this was ammonium persulphate. Although there were quite a host of chemicals that would

ammonium persulphate, containing a one-quarter per cent of sulphuric acid; rinse in a five per cent solution of sodium sulphite, wash, fix in hypo and wash well.

For a negative underexposed and



Negative by A. J. White,

Schenectady, N. Y.

dissolve the silver, it would generally be found that the dissolving agent would quickly remove the density from the surface of the film, but act much more slowly upon the lower layers. A good way of treating a negative that was correctly exposed, but overdeveloped, was as follows:

Reduce in a two per cent solution of

lightly developed (4), there were several suitable intensifiers, such as that with uranium nitrate.

The following — Lumière's formula — was recommended:

Mercuride chlorid	1 grain
Potassium iodid	3 grains
Sodium sulphite	40 grains
Water	1 ounce

After intensifying the negative in this solution, develop it in any clean working developer, and wash.

In the case of an underexposed but fully developed negative (5), it was necessary to reduce the silver deposit where it was more dense, and then, if required, build up the image. For this the lecturer recommended the following:

Reduce in a two per cent solution of ammonium persulphate, as mentioned above, and intensify with the solution given for (4), as though the negative had been underdeveloped.

Overexposure and light development (6) gave a flat negative — one with not sufficient contrast — and what was required in such a case was to build up the high lights. One of the best ways of doing so in a negative of this class was by the Monckhoven method, as under:

A.

Mercuric chlorid 100 grains
Potassium bromid 100 grains
Water 10 ounces

Bleach in this and wash well. Then blacken in the following, mixed together:

B.

Silver nitrate 100 grains
Water 10 ounces

C.

Potassium cyanid 100 grains
Water 1 ounce

Only so much of C as will just dissolve the precipitate first formed, should be used.

As soon as the blackening is complete, wash thoroughly at once.

To rectify the defect of overexposure and full development (7), a reducer, acting mainly upon the surface of the film, was the best. Of these reducers there was almost an endless variety; but the following solution was recommended on account of its simple nature:

Sulphuric acid 8 minims
Potassium permanganate. 16 grains
Water 10 ounces

Wash thoroughly. Brown stains, if formed, may be removed in a dilute solution of oxalic acid.

The defect in a halated negative was at the back of the film. The usual methods of treating such negatives was to reduce the density on the surface; but when that was done the density of not only the high lights, but also of the shadows, was reduced. The following method was recommended, but the lecturer advised a few trials on negatives of little value, before subjecting a valuable negative to the solutions. Bleach in —

Chromic acid 30 grains
Potassium bromid 60 grains
Water 10 ounces

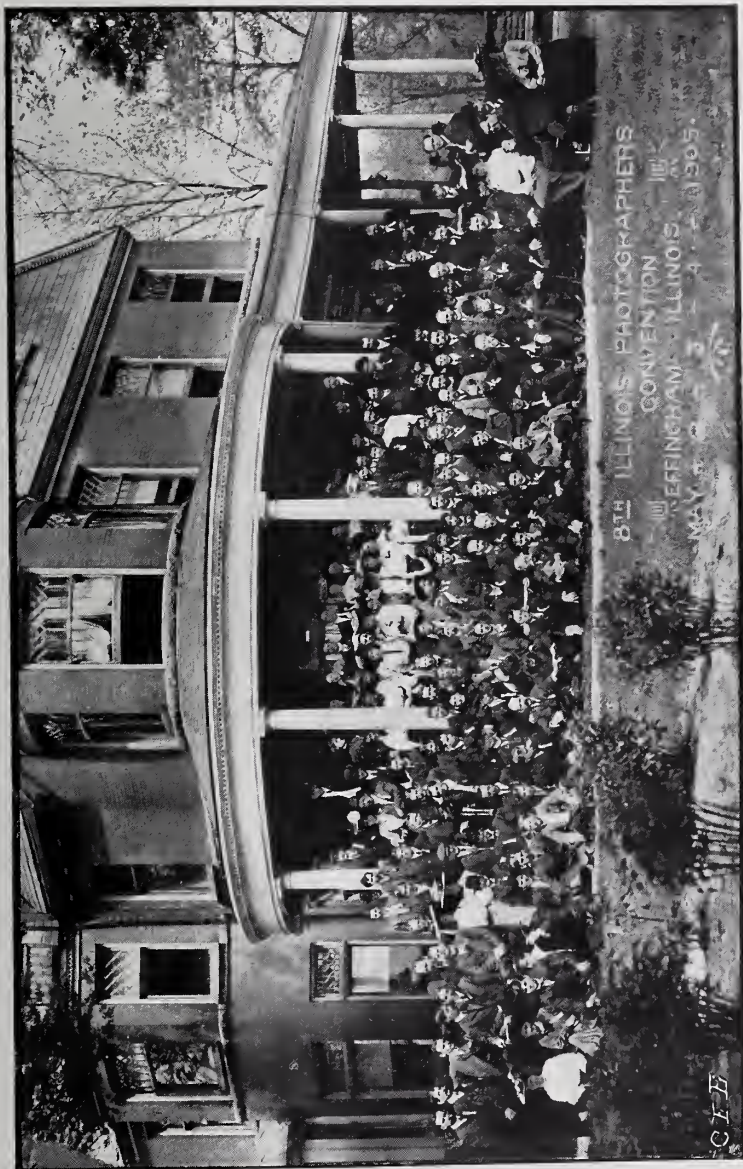
Wash thoroughly in several changes of a five per cent solution of potassium meta-bisulphite, and then in plain water. Afterwards, partially redevelop in any clean working developer; fix at once, and wash thoroughly.

This process was rather a delicate one, requiring a good deal of skill and judgment, and it was only by practice that one could learn to make good use of it.

Mr. McIntosh then proceeded to intensify a negative by the Lumière method, showing and explaining the various changes which the negative was seen to undergo. This method, explained the lecturer, appealed particularly to the pictorial worker, for by first applying the solution all over the film, and then working with a brush, a sponge or a piece of cotton-wool, upon certain parts, a great amount of control was to be obtained.

In answer to some questions, the lecturer explained that the negatives did not necessarily require soaking in water before being immersed in the baths referred to above; in some cases, however, it was desirable to rinse with weak ammonia and then to wash thoroughly to get rid of dirt and grease. All the processes described were more or less "tricky," requiring careful practice. In the case of ammonium persulphate, the addition of a little sulphuric acid in the first instance appeared to make the solution work much more regularly.

J. MCINTOSH.



The above illustration shows the members of the Illinois Photographers' Convention, grouped in front of one of the buildings of the Illinois College of Photography. The photograph was made by one of the students. The half-tone plate was made by a former student of the engraving department, who made the cut from start to finish. This speaks volumes for the thoroughness of the education in the institution, because in an engraving establishment the work is so subdivided that about one dozen men handle the work, each knowing practically only one branch.

THE WALRUS ON ART.

Having occasionally visited the wild and benighted regions of the North of England, and having frequently met samples of the inhabitants thereof in London, I am quite aware that in "they parts" the people speak a language (if such it can be called) which bears no trace of resemblance to what is generally recognized as the English tongue. But it has remained for an Altrincham correspondent to arouse me to the fact that the written language also has its peculiarities. This gentleman is good enough to describe a recent page of "Piffle" as "dem" funny. I think I know what he means, but I can assure him that if he finds it dem funny to read, it is no dem joke to write; and if he doubts that assertion, I respectfully request him to try *his* hand at writing eight hundred foolscap pages of it.

He then adds: "I wish you would say something on such photographic phads as phussitypes, out-of-focus-freaks, blurriscapes, etc." Of his liberal choice of subjects I think I prefer the *et cetera*. It is a pregnant theme. He seems to realize that he has set me a tough task, for he sarcastically proceeds: "Happy Good Friday to you, old man." To which I cordially respond: Old man yourself. I am not so old as I shall be if I live longer. And as to a happy Good Friday, I look upon that day as the most horribly ghastly day of the year — a sort of cross between a British Sunday and a stale bun.

Being willing, however, to write upon any legitimate topic suggested by correspondents, I proceed to attack the subject of "plussitypes and blurriscapes." By these terms my correspondent probably refers to pictorial photographs. He must understand that when a photographer finds a subject which by no possible treatment or contrivance can be made to yield a good photograph, he chucks it out of focus and calls it a picture. No good photograph can be a good picture, but a bad photograph *may* be; nay, if it be only sufficiently bad, it *must* be. This doc-

trine has been expounded and demonstrated by certain uncertain workers for many years. It is considered by them to be essential that a good picture should show no indication whatever of what it is supposed to portray, or, rather, of what it does not portray. If it be clear what the picture is meant for, there is an end to mystery, suggestion, tommyrot, impressionism, and all the other qualities which a real picture should possess.

If by some unfortunate accident the photographic pictorialist should secure a negative possessing detail or good definition, he should print it through a pile of dirty negative glasses. This introduces at once the necessary element of soulfulness. The man who produces a print which differentiates between a tree and a transept is a slave to his anastigmat, and art is not in him.

The sole aim of the photographic pictorialist should be the achievement of the three d's — delitescence, dematerialization and doloriferosity. (I hope my correspondent has got a dictionary. Thank goodness I have, or I should not be able to write like this at all.) If in the attainment of these three d's the worker should also secure a fourth, it will certainly be the one gracefully rendered by my North-country correspondent as "dem."

Let no reader lay the flattering unction to his soul that judged by these words I am one who condemns the fuzzygraph. On the contrary, I consider it the *summum bonum* (whatever that is) of all photographic art. It is the *multum in parvo* (or very near it) of artistic aims. To it, and to it alone, we must look for the *veluti in speculum* (although we shall not find it); and upon it may be inscribed in letters of gold the glorious question: "*Quod hoc sibi vult?*"

SULPHID-OF-SILVER toning of bromid prints has become very popular in Great Britain, and one of the paper manufacturers has just issued a warning that this toning bath must not be used in a room where plates and paper are stored.

MARINE PHOTOGRAPHY.

The opening of the one-man show of "Marine Photography and Wave Studies," by Mr. F. J. Mortimer, F.R.P.S., at the Royal Photographic Society, gave that worker an opportunity to make some practical remarks on the subject of photography of the sea. He said that the first aim of the marine photographer should be to secure a truthful rendering of the actual scene of motion, endeavoring, if possible, to catch the picture at the right moment, when the composition had assumed its most likely correlation of parts. A quick eye was essential, and the mind had to be made up rapidly, as there was no chance of exactly the same combination of form happening again.

DIFFERENT KINDS OF WAVES.

The difference in wave forms was remarkable — locality and circumstances had much to do with their formation. Natural and regular waves were only to be found far at sea, away from any disturbing obstructions in the shape of rocks. Waves nearer the coast far exceeded in violence and size the natural deep-sea waves, and assumed far more fantastic shapes. Breakers and surf were the result of the upper part of the wave being urged on by wind or storms, while the lower part was obstructed by rocks, sand, weeds or adverse currents. The spray was carried by the wind and its own impetus to great heights, and proved the worst obstacle to be overcome when taking photographs among the breakers. It not only rendered the lens temporarily useless, but would soon entirely spoil any exposed brass-work on the camera.

DIFFICULTIES AND COSTUME.

The great trouble in all pictures of big waves, whether at sea or among the rocks, was the lack of scale; and the only way to carry conviction was to photograph the same scene later in calm weather, showing the same rock formation, but with a man or boat included to convey the idea of the relative scale of the wave in the storm picture.

A tripod was of very little use in this sort of work, and not much scope was offered or possible for focusing on the ground glass. The worker, therefore, should accustom himself to holding the camera steadily in the hand at eye level, by means of a strap handle, and aiming it at the scene to be photographed. The ball of the pneumatic release of the shutter could be held between the teeth, and smartly bitten at the instant of exposure.

A certain amount of physical strength and recklessness was necessary for the wave photographer, as occasional bruises and broken apparatus, to say nothing of frequent drenchings, were very likely to occur. In some cases a companion and a stout rope were essentials to success when working among dangerous rocks.

Oilskins and seaboots were the only possible kind of clothes that could stand the wear and tear of the work, and Mr. Mortimer suggested oilskin trousers, short coat, and sou'-wester worn over a light flannel outfit as the best costume. In any case, the ordinary mackintosh was worse than useless on very rough days, and would only prove a hindrance.

POINTS OF VIEW.

It would be found a mistake to point the camera down when standing at any height above the sea level, with the idea of including either more foreground or to make the waves appear bigger. The effect would be that the water was running up hill to the horizon, and anything in the shape of boats, etc., in the distance would appear as if stuck on the top of a wall.

An interesting series of wave and rock pictures could be easily obtained on a suitable day without moving a great distance from a chosen spot. First of all, a great variety of lighting presented itself according to the time of day. Then, by slightly altering the direction in which the camera is pointed, pictures that showed considerable difference in character could be obtained. Perhaps the greatest variety of all could be obtained from about the same standpoint

by taking a series of pictures at different stages of the tide.

Lenses of different focal lengths were also useful to give different renderings to the same subjects, but a lens of the greatest focal length that could be reasonably used should always be employed. Telephotography was not very useful in rough weather, owing to the cumbersome apparatus and vibration caused by wind, etc. A note of warning was necessary to the photographer climbing over the slippery rocks, to sound all footholds before venturing forward, and also to see that there was a safe line of retreat before going too far out on the rocks when the tide is rising.

STUDYING THE SUBJECT.

Fine wave studies could often be obtained on windless, sunny days, when a strong ground sea was running. The ground sea, usually in the form of huge rollers, were at the time the only indication that reached the land of a storm far at sea.

Before attempting to photograph waves breaking on to rocks, the moving masses of water should be carefully studied for a time until the character of the advancing wave could be gauged to a nicety, and its point of breaking foretold. There was no doubt that an extra big wave recurred at more or less regular intervals, and the interval becomes more certain when the rollers advance from a settled direction—wind blowing inshore and tide rising. It would probably be found, however, that if there was a cross current, or if the rocks against which the waves were dashing were on a jutting headland, the breakers occurred first from one direction and then from another a point or two to the right or left. They approached the rocks and broke alternately, and it would be noticed that frequently both masses of water would meet and break simultaneously, and an extra big wave would result. This was the opportunity to take advantage of to secure the most striking result.

EXPOSURE.

As regards the actual moment of ex-

posure, it would be found that in every wave form, when it strikes among rocks, there was an instant when the mass of water is at its maximum height, and remains stationary, suspended in mid-air. That was the moment the exposure should be made, and far finer results will be obtained than with indiscriminate "potting" at the rushing water. As regards the lens, a high-class anastigmat was not absolutely necessary, owing to the high actinic quality of the light usually present. The ordinary R.R. lens, stopped down, was generally good enough for most work; and as a rough guide it would be found that with a rapid plate $f/16$ and 1-100 of a second would give a fully exposed plate at noon in early spring. In bright sunshine a smaller stop could frequently be used, or a shorter exposure given.

The bright, sunless day, with driving wind clouds, was possibly the ideal day for wave photography, and frequently fine results were obtainable on dull, gray days.

HINTS ON APPARATUS, ETC.

Very little tripod work was practicable in rough weather, so it was best to always use the camera in the hand, and use a direct vision view-finder of large size at the eye level.

Five by seven was quite large enough for all purposes, and in all cases the entire camera, etc., should be enveloped in a protective waterproof covering of oilskin or rubber, made to fit, and leaving only apertures for the lens and shutter release. Flaps should be made to button down all round, to get at slides and set the shutter, etc., and even then the camera and lens should not be exposed to the direct action of the flying spray more than necessary. A frequent coating of vaselin on all brass binding, leather and woodwork would do much to ward off the attacks of the salt water and air.

Although it had been found possible to occasionally secure wave pictures with an exposure of 1-15 of a second, Mr. Mortimer found that 1-30 to 1-130 were the exposures that were most likely to give good results.

Of the four types of shutters tried, namely, the metal diaphragmatic, time and instantaneous roller blind, the foreground and focal-plane shutters, the first was useless for wave work, being all metal, and also leaving the front of

not be surpassed by the other shutters — that is, provided it was not used at too great a speed, in which case the water would appear frozen, or look as though stamped out of tin. The focal-plane shutter scored most on dull days,



Negative by C. M. Whitney,

Bayonne, N. J.

the lens exposed; the other three were all good at times, particularly the foreground shutter, when there was a dark, rocky foreground and clouds in the sky. The focal-plane shutter, however, gave a rendering to these subjects that could

owing to its high efficiency. A comparatively smaller stop could be used with this shutter with approximately the same exposure given by the before-lens variety, as in practice it would be found that it admitted about three times

the amount of light with a given exposure that any other form of shutter giving the same approximate exposure did.

In all cases the lens should be well protected from flying spray, and the best type of camera for the work should have a focal-plane shutter at the back and a before-lens shutter in front. The exposure would then be made by uncovering the lens, releasing the focal-plane shutter, and quickly covering the lens again, an operation that could be accomplished in about one second.

PRACTICAL WORK.

The camera should not, as a rule, be pointed straight at the incoming breakers, or the picture will appear to lack stability, and the repetition of horizontal parallel lines of rollers was displeasing, while those breaking in the immediate foreground would have a "lace-curtain" effect. The breakers or rollers should therefore always be taken, if possible, at an angle if the most pictorial effect was aimed at. The shore or rocks should run more or less diagonally across the base of the composition, and the breaking wave should be taken more in "profile" than "full face." The idea of action was thus better conveyed. In reference to telephotography for this subject, practical experience pointed to the fact that the conditions were altogether adverse to its employment, particularly as very little focusing or composing of the subject could be attempted on the ground glass, and the camera could not often be used on a tripod or the lens left uncovered for long.

The late autumn or early spring were the best times of year for big-wave photography, and the whole of the winter was also available, but usually the days were so short that not much work could be accomplished.

PLATES AND FILMS.

Films and color-sensitive plates were more liable to attack by the salt air than ordinary plates. Plates and films should, therefore, be very carefully packed both before and after exposure, wrapped in oiled paper and kept in an

air-tight tin box, if possible. Otherwise, if kept for any time before development, mold spots or even a salt crystallization would appear, even after fixation, washing and drying in a damp salt atmosphere. The plates should not be kept in the dark slides longer than was absolutely necessary.

Color-sensitive plates and screens would be found useful at times, when all else had failed to render the relative tone values of rocks and waves satisfactorily, but they were not always necessary, as in most instances a fairly quick ordinary plate (backed) and foreground shutter would prove sufficient. The light was so actinic and the contrast between the intense white foam and blue sky so marked, that unless considerable care was taken, color-sensitive plates and screens would be likely to give overcorrection, and render the sky unnaturally dark. They usually scored, however, when dark green rocks were included in the picture. These, under ordinary circumstances, would photograph black, but they could usually be correctly rendered with the assistance of the iso plate and screen. The plates should always be backed, owing to the violent light and shade contrasts that frequently occurred.

THE NEGATIVE.

As the negatives were usually high-speed snap-shots of subjects teeming with light and atmosphere, and yet sometimes containing strong contrasts in the shape of dark rocks and white foam, development should be undertaken with considerable caution. Slow development in a very weak developer was best suited to the class of negative desired; and stand development, using a dilute adurol developer, also gave very good results. A negative full of detail, and thin, should be aimed at. This gave the rocks a chance, and it was also the right kind of negative from which to make a good enlargement.

The lecture was illustrated throughout with lantern slides which gave considerable force to the points mentioned. —*The British Journal of Photography.*

"NEW IMPETUS IN PANORAMIC PHOTOGRAPHY, BY RECENTLY CONSTRUCTED APPARATUS."

In the early days of photography, when the scope of a picture was determined by the angle that a lens would cover, there was a great desire to increase the angle of view. Later, a camera was made to include a view through a very large number of degrees.

unrolled past a slot on to a roller turned by clockwork. The camera is also turned about an axis by the same mechanism. In so doing, it spreads the image of landscape on the film in a most perfect manner, through any desired number of degrees.

This is the only practical instrument manufactured for panoramic photography and the readers of this article



Negative by P. M. Riley,

A WINTRY ROAD.

Lacoma, N. H.

This was even done in the days of wet plates, before any dry plates or film were in use. The many imperfections in this camera and all those that followed, rendered them of little value, so that, up to the present time, none have been placed on the market in America.

A new camera is now being sold that is about to revolutionize the making of panoramic and cycloramic photographs. It is manufactured by the Rochester Panoramic Camera Company under the name of "Cirkut." It is of very simple construction and uses a film which is

will do well to investigate the merits of this machine.

The writer has had considerable experience in making panoramic and cycloramic views. The old way consisted in making several negatives and vignetting them together. A panoramic camera was constructed at the College of Civil Engineering, Cornell University, with which the writer made a view 7 by 65 inches, of the University, and immediately it was received with great favor by the public and \$1,000 was received for prints of it.

This is a good proof that the business of making panoramic views is very lucrative. The size of the picture commands a good price with subjects judiciously chosen.

This branch of photography opens up a field that has never before been developed on account of a lack of apparatus adapted to the purpose. With the Cirkut at one's command, fine results are always insured and the variety of work is greater than would seem at first thought.

Among the numerous applications are the following: Topographical work for the civil engineer, geological formations, archeological research, scenery of all kinds, as mountains, lakes and valleys, harbors, fortifications, battleships, army maneuvers, manufacturing plants, real estate locations for purposes of insurance and real estate promoters and legal proceedings, mining, construction work, irrigation, universities, residences, groups, games, athletics, newspaper and magazine illustrations. Besides these, numerous other uses will suggest themselves to the photographer.

Several cameras have been placed on sale of the type where the lens is turned while the film is stationary. These all make a picture of something less than 180° , but never before in America has there been placed in the hands of a photographer a camera that will do the work of this newly invented Cirkut camera.

The special features of this instrument are: The use of films of various widths up to ten inches, its capability of making views of any length up to 360° , the use of objectives of different focal lengths, a device for accurately focusing the image on a glass screen, a device for swinging the lens instead of the back of the camera, and for raising and lowering the front board. To these must be added the fine workmanship shown in the substantial yet light construction, only weighing eighteen pounds complete, being in size only 9 by 12 by 12 inches. It is easily and quickly manipulated. The film can be put in or removed from the holder in

full daylight, a feature well adapted to field work. In fact, the camera is so constructed as to render mistakes impossible.

To the man who is fortunate enough to own one of these machines, a new field has been opened wherein he will certainly be able to distinguish himself in producing results never before dreamed of by the public.

S. L. SHELDON, B.S.,
Cornell, '98.

SCREWING CAMERA ON THE TRIPOD HEAD.

I presume that others besides myself have experienced more or less difficulty at times in attempting to attach the camera to the tripod, the tripod screw being very contrary and seeming determined not to enter the proper hole in the camera.

To obviate this difficulty I devised the following plan:

At one end of the hole in the tripod top, I bored a hole a little larger than the shoulder on the tripod screw. I connected the two holes by cutting away the wood between them, and at the opposite side of the larger hole I cut away the wood so as to make a hole as in Fig. 1, large enough for the head of the tripod screw to easily pass through.

I then bought a small, brass, thumb-nut bolt, three-quarters of an inch long. Next I took a piece of flat brass, one-eighth of an inch thick, one inch wide and two inches long. In one end I drilled a hole the size of the bolt, and in the other end I filed a slit of the same width as the diameter of the tripod screw, one-half inch from the end of the strip, rounding off the corners of the opening slightly, as in Fig. 3.

Place the tripod screw in position with the brass strip under the shoulder, pass a brad-awl through the hole in the other end of the strip clear through the tripod head so that the point of the brad-awl shows through on the other side. Next, with a knife cut the cloth on the tripod head around three sides of a square, in the center of which is the point of the brad-awl; have the

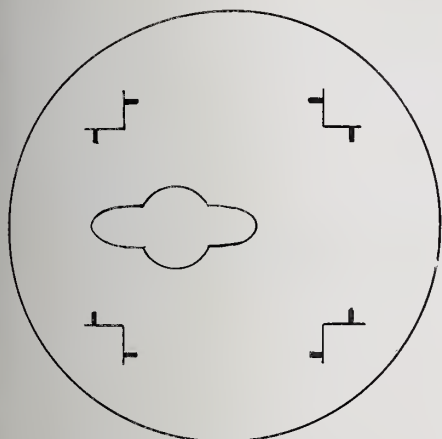


FIG. 1

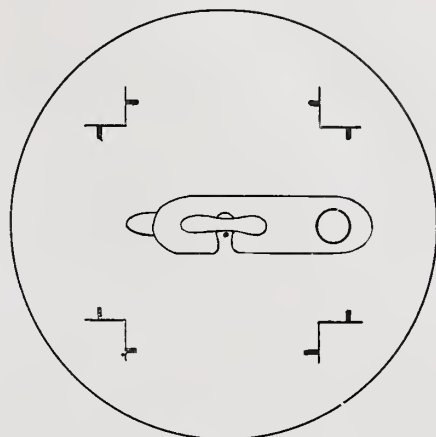


FIG. 4



FIG. 2

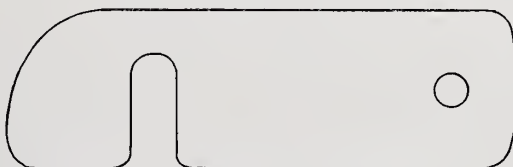


FIG. 3

square somewhat larger than the square head of the thumb-nut bolt. Lift up the cloth from the wood and cut out enough of the same so that the square head of the bolt will be flush with the top of the tripod head. In the center of this square make a hole large enough to pass the bolt through and then glue the cloth back into the place it originally occupied. Place the brass strip in position and screw the nut to the bolt.

In making use of this arrangement, first attach the tripod screw to the camera, then pass it through the hole in the tripod top, hook the brass strip under the shoulder of the screw, screw the camera down into place, then tighten the nut on the bolt and all is secure. In practice you will do all this in much less time than it takes me in the description.

When ready to take off the camera, proceed as you have been in the habit of doing, leaving the screw in the top of the tripod, the thumb-nut will hold

the brass strip in place and there will be no danger of the tripod screw being lost, and it can easily be removed from the head when desired.

It is probable that a common, round-head screw would answer the purpose as well as the thumb-nut bolt, but the latter costs only a few cents and, being adjustable, will give better satisfaction in the end.

JOSEPH HICKS, M.D.,
Calhoun Falls, S. C.

PYRO FOR GASLIGHT PAPERS.

From a California amateur we recently received a very fine tinted print on a gaslight paper, the color of which the writer said he secured by using a pyro developer. He prefers an old, thick, brown, almost-used-up plate developer on a rather overexposed print, and it gives a fine, warm, black color, and, in addition, in portraits he considers it makes the flesh quality easier for amateurs. This little suggestion may prove valuable to many readers.

LANDSCAPE LIGHTING.

I have often wondered why the instructions given the view photographer always read: "Keep your back toward the source of light."

We all know (or if we do not, experience will soon teach us) that if we expose a plate directly toward the source of light, the rays will strike the lens so strongly as to make a "ghost" on the plate, or fog the same; also, there will be a lack of detail in the objects photographed, because they will be standing in their own shade and the only high lights will be upon the ground and the sky; and unless "backed" or orthochromatic plates are used, a certain degree of halo will extend from the high lights over onto the shaded objects.

We are familiar with these facts. But there are directions from which light may come other than directly in front or directly behind us.

For years I closely followed this instruction, because I thought I *had* to. The result was that many desirable views of which the only available position from which to take them was in the north, remained for a long time untaken. Again, many negatives which circumstances compelled me to expose in the bright sunshine had a "flat," uncontrasty, overexposed appearance which did not show up the beauty the scene demanded.

My recent several years' experience manufacturing stereoscopic views have shown me these facts more vividly than before. If there is anything that will bring out all there is in a photograph, it is a stereoscope with a well-made view in front of it. I noticed that in many of my views (no matter how carefully they were made) there was a lacking of that "standing out"—that bold relief which stereo views should possess. They focused all right, but there was a flat, dazzling—a frost and snow—appearance to them—a lack of contrast. Telegraph poles and trunks of trees were but smooth, white streaks. Once I mistook one of these poles,

thinking acid had run down over the print and bleached it.

As I said in the beginning, I do not understand why we are instructed to seek such a lighting. The same instructors are quite likely to tell us that (in a way) photography is the science of portraying lights and shadows. Yet, the kind of *views* they tell us to make contain no shadows.



FIG. 1.

Now, I have been disobedient to this rule and have been making views with the sun "any old place," except to my front or back.

Perhaps I have poor taste, but in my estimation the photographs taken in this way are much more beautiful and have more of an artistic and realistic appearance than those made by the prescribed lighting.

If the sun is either to the right or left and a little at the rear of the camera, so

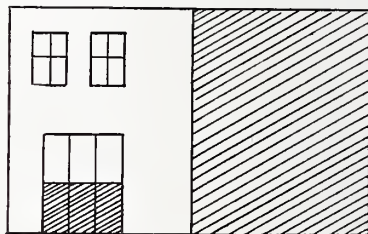


FIG. 2.

the rays will not strike the lens, the best results can be obtained. Of course, if the sun's light is softened by a cloud between it and the scene, the shadows will also be softened and a softer and still prettier effect will be observed in the finished picture. Besides overcoming the objections pointed out in the foregoing, other advantages are gained. It is necessary to have shade and shadow

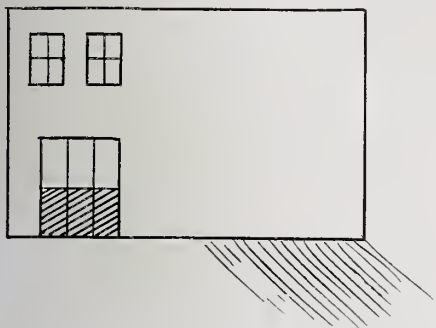


FIG. 3.

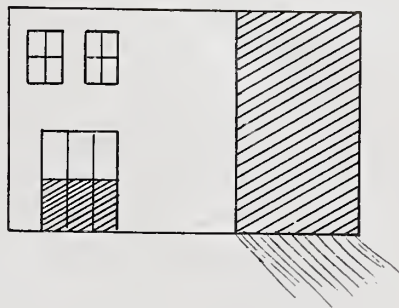


FIG. 4.

in a view as well as in a portrait. The up-to-date operator is aware that deep shadows, balanced by the right proportion of lights, are becoming more and more popular in portraits. A full, flat light on a sitter with no shadows, as a rule, is considered not good taste.

In a view, like the telegraph poles and tree trunks, the identity of the object is often lost when both shade and shadow are lacking. To better impress this upon the mind of the reader, I call attention to the accompanying drawing. Fig. 1 represents a building. This building is on the corner of a street, but the sun was to our back when we photographed it, and there being no shades or shadows, and the top and bottom lines appearing straight and parallel, it has the appearance of one side of a straight structure or wall. In Fig. 2 we have added the shade that would be thrown by the sun at our left; although the same building, it impresses our mind differently. The corner and front and side are clearly marked out. The shade

not only gives shape to the building, but tells us from which side the sun is shining. In Fig. 3 we have omitted the shade and added the shadow, this to an extent gives the building form, but it also tells us the exact position of the sun. Fig. 4 combines all there is in Figs. 2 and 3 and gives the building shape, shade and shadow, and the picture stands out—has relief. Fig. 5 shows a long, shallow building, and Fig. 6 represents a narrow, deep one. Either of the last three pictures would look exactly like Fig. 1 were it not for the shade and shadow.

In portrait work the little things are undesirable. Few accessories, a simple, suggestive background and but few extra wraps, frills and ruffles are required to make a nice, clear, refined portrait. But in views it is different; all the little details, all the productions of nature, or art if it may be, should be shown up (of course, always with good composition taken in consideration), and then the view becomes a picture—

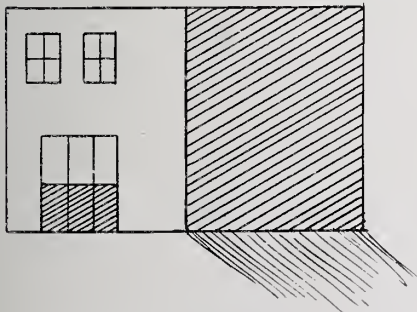


FIG. 5.

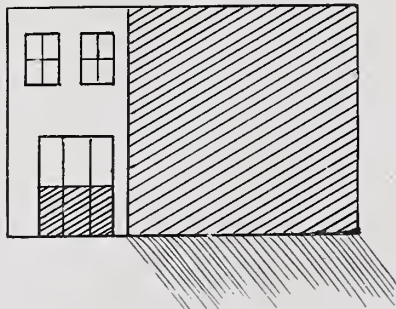


FIG. 6.

it becomes a study. Even he who did the work can sit for hours and gaze upon the finished product and find many little beauties in it which he did not know existed.

So we find that drawings 4, 5 and 6 not only *show* us something, but they *tell* us a story. The buildings have shade and shadow which tell their shapes. The pictures are more beautiful, for they stand out — have relief — and the shadows which are always present with light, help to break the monotony of one tone and add grace and effect. We also observe that the picture was not taken in winter amid frost and snow, but rather on a bright, sunny day, with the sun to the left of the operator, and if the building faced the west side of a street running due north and south, it was about one hour of noon when the exposure was made.

GEORGE F. GAVITT.

GUM-BICHROMATE AT THE HULL PHOTOGRAPHIC SOCIETY.

Recently Mr. Heape gave a demonstration of this process, in which, after describing the methods advocated by other workers, he showed those which he himself employed. Ordinary cartridge paper, costing 1 penny the sheet, he said, was a good paper to begin with, and this he soaked in a ten per cent solution of potassium bichromate. Hollingsworth's non-absorbent paper he also strongly recommended for the process.

After the paper is thoroughly soaked, it is dried in a warm room away from daylight. Sufficient of a gum solution — made up of 1 ounce clean gum arabic to 3 ounces water strained until perfectly clean and clear — is taken, and mixed with dry color to make a paste. The color may be vegetable black, venetian red, etc., or a judicious mixture of both, and must be ground fine before use.

The bichromated paper is quickly coated with the gum-color mixture by the aid of a hog-hair varnish brush, taking care to rub it well into the paper, and when thoroughly dry is ready for

printing. A negative inclined to be thin is most suitable.

As to printing, he said that if we take a negative of similar density and place under it a piece of P. O. P. in another frame, exposing at the same time until it is just as far as a finished P. O. P. print should be, the gum print will be ready for development, but if carried a little further there would be no harm done.

The gum paper must be dry when printed, but if a veiling of the whites is required, i. e., if it is desired that the print shall have no clear white paper in the high lights, much modification is possible in this direction by slight dampness of the gum-bichromate paper. The damping must, of course, only be a very slight one.

The paper develops itself in cold water on being turned over and over at short intervals, and development can be hastened where necessary, or locally encouraged, by gently dropping or flowing a smooth fine stream or even a fine spray of cold water upon the print. If it is much overprinted, warm water can be used.

It is best, said Mr. Heape, only to attempt one print at a time until a little practice has been gained, and on no account must one print touch another during its very tender stage of development. When nearly dry, much local work can be done with a fine camel's-hair brush.

If it is thought fit to introduce figures, etc., or even clouds from other negatives, all that is necessary is to remove that portion where the addition is to come with the brush referred to, and when dry to resensitize the paper and coat the parts for duplicate printing with the same gum and color mixture, to print in the figures or clouds, and to develop again. When once the print is dry, nothing will remove that pigment which has remained right through the process; hence the necessity to brush it away just where the additions are to come in, during its first semi-dry state.

The Photo-Beacon Exposure Tables are guaranteed correct. Price 25 cents.

ENAMELING P. O. P., CARBON, ETC.

A brilliant surface, which is still admired by many and which is absolutely the best for bringing out every detail that a print contains, may be given to any gelatin-faced print by squeegeeing it on waxed glass and stripping therefrom when perfectly dry. All the difficulties of this method of enameling may be avoided if the following very simple directions are followed: First, the surface upon which the prints are to be squeegeed must be perfectly brilliant, clean and free from scratches. It may be a sheet of porcelain, an enameled ferrotype plate or any other similar surface, but I personally prefer plate glass. When I say clean, I mean that it must be absolutely free from dirt, dust, moisture, traces of paste or gelatin, or even grease from finger-tips. Having the plate absolutely clean and well polished, it is ready for the next operation.

Second. Wax the plate with a preparation consisting of beeswax, 25 to 50 grains; benzole, 10 fluid ounces. Let the beeswax be thoroughly dissolved in the benzole before attempting to use the waxing solution, and remember that it will keep absolutely indefinitely in any receptacle from which the benzole can not evaporate. To wax the plate, take a little of this waxing solution on a small pad, made by enfolding a little rag or cotton-wool in a piece of clean fluffless linen cloth, and with this, using rapid circular sweeps, wax the plate all over.

The benzole evaporates rapidly, leaving an exceedingly fine film of wax on the surface of the plate. Having the whole surface absolutely covered, the next thing to do is to remove almost all the wax by means of a new and clean pad of linen, using it again in circular sweeps, and aiming as far as possible to work equally over all the parts of the waxed surface. By doing this properly you secure a glass plate which has a very fine film of wax absolutely all over it, yet quite invisible. If the rubbing is irregular the wax may be left on the glass in patches in sufficient quantity

to transfer to the print and mar its surface, and whereas if the rubbing is too hard, the wax will be entirely removed from certain parts of the surface, with the result that the print will stick in such places.

Third. The print which is to be squeegeed must not be taken wet from the water in which it was washed immediately after fixing, but must first be allowed to become quite dry, then it should be placed in water and allowed to soak completely through, but not to stand soaking for a long time before it is squeegeed. Take it from the water as soon as it is quite limp, lay it face down upon the waxed plate, hold one corner firmly with thumb or finger, and placing the squeegee near the corner, sweep it across the back of the print with a firm, continuous stroke, but without very hard pressure, then turn the plate round and squeegee the print from the opposite corner at which it was first held. Two strokes of the squeegee properly applied should result in (a) removing all surplus water from beneath the print, and also from its paper; (b) by pressing the print into absolute contact with the glass and removing all air bubbles. To see whether this has been done, the print may be examined through the plate glass, in which case air bells will be seen as silvery looking particles. If the print is quite free from these it is ready for the next operation.

Fourth. Stand the plate glass in some place where the print can dry regularly and fairly rapidly, and leave it until entirely dry.

Fifth. When thoroughly dry the print will strip itself, or if it fails to do so, the slightest touch at one of its edges will cause it to leave the plate glass.

If properly done, the glass will be left perfectly clean. If not, it must be cleaned afresh, waxed and put ready for the next lot of prints.

I am aware that many people prefer French chalk to the beeswax, but I am sure that any old printer would rather use the beeswax, because, although it is a little more trouble to apply, it makes an absolutely perfect

surface, and after the plate of glass has been waxed half a dozen times, it gets into such fine condition that it will work almost an indefinite number of prints without further rewaxing. — *Photographic News*.

VERONICA.

PRINTING ROLL FILMS IN THE LENGTH.

One of the simplest devices we have seen for this purpose we found in use by an amateur the other day. It was an ordinary half-plate frame with a fitting at each end to hold one of the spools on which film four inches wide is wound. The spools could be revolved, but stiffly, and the frame had a piece of glass in it. By sticking a piece of stiff paper, six inches long and the same width as the film, to each end of the long strip of film, inserting the end of these papers into the slots in the spools, and winding up, the long strip of film negatives was kept on the two spools with a piece between them from which the print could be made. Rolling one spool and unrolling the other any desired negative in the roll could be brought into position for printing and kept there. With this appliance the curling to which some films are liable ceases entirely from being a nuisance.

GOVERNMENT PHOTOGRAPHIC EXAMINATIONS.

At least once a year the United States Government holds examinations for expert photographers who are desirous of entering the Government employ. Until recently we have had no chance of learning the nature of the questions set at the examinations, but a subscriber who sat recently sends us a sample of the questions that were propounded to those who desired to qualify as velox printers.

No. 1. Describe an enlarging apparatus to be used with Cooper-Hewitt mercury vapor lamp, and how to use it.

No. 2. Describe above Cooper-Hewitt lamp.

No. 3. Give a developing formula for bromid paper.

No. 4. Give formula and method of

toning bromid prints without the use of hypo, alum, uranium and another chemical which the photographer forgets the name of.

No. 5. What is the cause of friction marks and lines on a velox print after development, and how can they be prevented?

These were all the questions asked that bore on velox printing. Other questions were: What is a panchromatic plate; what is an apolchromatic lens — the photographer says he never heard of one. Possibly apochromatic is meant.

EDITORIAL TABLE.

FROM BURKE & JAMES, 118-132 West Jackson boulevard, Chicago, we have received copy of their catalogue for 1905. Those who have been wise enough to secure previous catalogues will at once write for a copy of this new edition. All others should be advised to do likewise, because it contains a very complete description, copiously illustrated, of almost every article relating to photography that is to be found on the American market. It will be sent on receipt of postal.

THE PHOTO-BEACON.

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Sarah W. Holms,

FIRST PRIZE.

Chicago.

THE PHOTO-BEACON.

EDITED BY F. DUNDAS TODD.

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AUGUST, 1905.

No. 8.

ART AND THE CUSTOMER.

Here are two points of view. One of the officials of our Chicago Art Institute some years ago informed me that the most regular and appreciative attenders in the picture galleries on Sunday were the uneducated Italians from the poor districts of the city. The rich Americans, who very occasionally drop in, hustle through the rooms, make a few common-place remarks and pass out. Art is not for them, but the Italian father accompanied by his little ones lingers long over the masterpieces and can be overheard pointing out the beauties to his children. Art is a part of his life. I notice that an official of one of the most famous art museums in London has just made the same statement regarding the visitors to British galleries. Yet, the photographers who cater to the Italian trade in Chicago, New York and other large cities have assured me times without number that their customers can not appreciate artistic work. If I am to believe practically all the photographers I have talked to in the United States, very few of their customers have any appreciation for pictorial qualities in a photograph, or as one and all put it very tersely, "My customers won't stand for art." At conventions one hears the same story. Once in a while some photographer gets on his feet, derides the whole art movement in professional photography and not infrequently brings down the house by his remarks.

Let us investigate this curious anomaly a little. How is it possible that a race can appreciate the work of the old masters and the best of the modern painters, and yet be vandals when art is presented to them through a photographic medium. Art is art, no matter the medium, we have always been told, and we must accept this dictum until contrary proof has been advanced; and so it is incumbent to look still further for the cause of the rejection of photographic art by the uneducated Italian. The medium being laid aside, we are now driven to consider the man. The old masters were undoubtedly artists, so the whole world admits; but has it been admitted that professional photographers occupy the same position in the niche of fame? I know they claim to be artists, as witness their statements on their mounts and stationery; but has the pictorial world conceded that they have attained that honorable status? I think not. As a matter of fact, their private assertions to me encourage the opinion that they are rather proud of the fact that their work is not pictorial, but, in fact, the reverse, because they assure me it sells, though few of them are rushed to death with orders and have therefore little cause to be proud of the big demand for their supposedly popular commodity at remarkably low prices.

At a recent convention I got very tired of the usual arguments advanced by the photographers on the floor and I therefore begged permission to put a few

questions to the speakers. I wanted to know why photographers posed their subjects. If the customer did not care for art, the photographer who took his customer just as he or she happened to be would produce work just as satisfactory to the said customer as did the one who posed the figure and arranged the draperies. My friends would not admit this. Then I wanted to know why they indulged in posing and arranging of the draperies, introduced certain accessories and modified the lighting before making the exposure. I presumed that this was done to get a more pleasing effect, and they kindly admitted the force of my presumption. Then I pushed the argument still further home by pointing out that the moment they modified the natural pose or changed a line of the clothing, by that one act they had tried to enter into the world of art and I wanted to know what was the limit of the advance. I hold the opinion, but I am open to correction, that the average photographer, in posing his subjects, puts into his work all that he knows about artistic principles, and that if he knew more he would gladly add that too, and so the limit of pictorial effect in professional portrait photography is, I am afraid, not set by the taste of a customer, but by the ignorance of the photographer.

Now, all this has been very general, let me get down to the particular. In a previous article I told about a crowd of about one dozen photographers, who got together in Chicago once a month for study and mutual aid. By some turn of fate I have drifted into the position of class leader. At every meeting I hammer away upon two ideas—first, the great simplicity of the ordinary technical processes connected with the making of a negative, and how better results can be attained by mechanical means than by the exercise of so-called judgment. Of course, I found them very skeptical, and though I produced prints to prove my case, even then they would not believe me; nay more, they tried by argument to show my position was absurd, but not one of them would make the trial in practical work to find

out for himself. It reminded me of the scientific world, when Galileo first upset its equanimity by announcing that on turning his new telescope on the planet Jupiter he had made the amazing discovery that it was accompanied by four moons. We, in this century, would suppose that the astronomers of his time would have made a simple telescope like the one that Galileo had, have pointed it to Jupiter and in a few minutes have found out whether the conditions there were or were not as asserted. Instead of doing this, however, each reached for a wad of paper and a quill and proceeded to write a tremendous book to prove the absurdity of Galileo's statement. These huge leather-bound tomes are in existence to-day to prove what fools we mortals be, and to be a solemn warning to future generations.

At one of our recent meetings, the subject for consideration was the scheme of lighting advocated so strenuously by the late James Inglis, and as most of the members of the class had been unable to get it right, I was called upon to demonstrate. Now, I never worked in a studio in my life. Every photographer assures me that it takes weeks, if not months, for him to understand how to get desired effects under a new skylight. Only three times in my life, with intervals of about five years between each event, have I been called upon to demonstrate this lighting, yet, on each occasion, I think, I made good, which shows the advantage of being a theorist rather than a practical man. After lighting the face of the sitter—which, by the way, was done without my eyes ever looking on the ground glass—I asked the photographer in charge of the camera to make three exposures on the same plate, giving the first one what he considered to be the correct exposure, in this case three seconds, and then to double the exposure for the second and to double that for the third. He did so, and at once developed the plate. At my request, he provided me with three sets of prints and these are reproduced elsewhere. There was no question but that the three exposures were developed exactly in the same developer for the same

length of time, because all were on one plate. The printing might have been more uniform, because the longest exposure is not printed nearly so deeply as the shortest, but still, at a casual glance they might have been taken from the same negative, and so this little practical demonstration simply bowled over the would-be arguments that had been advanced. One of the members wanted to know how to get a soft lighting on the face of the subject so

spacing, line and tone. Many of them were afraid that fuzziness was my idea of art and it took some months for them to grasp some idea of what was meant by tone. At our last meeting, two of the members made a very decided jump forward with their work in this direction and these prints I also reproduce, in order to show what we are trying to aim at, and I think every photographer would be only too pleased with himself if he could turn out this



Wm. S. Rice,

SECOND PRIZE.

Stockton, Cal.

as to avoid showing the rather deep hollows in his cheeks. The camera was moved about one foot, the sitter's head turned round to suit and the result can be seen in the fourth print that is reproduced.

It was my turn to get even with the crowd, so I asked them as a whole to see what they could do in a strange sky-light by photographing me. The result is also shown. I am not stuck on it.

My second aim has been to get the members to appreciate the importance of

kind of work all the time. The customers were highly pleased with the work.

In our discussions, one strong point has been brought out very emphatically, one that is rather humiliating to photographers as a whole, and one that, I think, hits specially hard the self-satisfied non-pictorial professional, because it deals with photography as a mechanical process. I will not permit the members to bring anything they choose to our meetings, but I insist on setting them a stated subject, and the

members have had borne in upon them rather unpleasantly this fact: that very rarely can they start out for a predetermined end and attain the result they want. In any other line of business one can go to a good workman with a plan to be followed or an article to be duplicated with the utmost confidence that the finished product will be as ordered. Where, however, is the photographer who will undertake to deliver to the customer a predetermined result? Personally, I know but few, and herein was where my old friend, James Inglis, was a master in lighting, because I would tell him an effect I wanted to see produced and he never yet failed to make good at the very first trial. Practical photographers who say their work is not artistic have yet to prove to the world that they are even good mechanics.

F. DUNDAS TODD.

THE STORY OF THE STRIPED WAIST.

Recently some Chicago photographers were telling how on certain occasions each had happened to put his foot in it. One told this story: One day he photographed a lady who was arrayed in a shirt waist of a very decided striped pattern, so distinctive, in fact, that he felt he could never forget it. A few weeks afterward another lady of the same size and build as the former one came in to have herself photographed, she also wearing the same kind of waist that Mrs. Smith had done. The effect upon his mind was such that he could not refrain from remarking, "I see you know Mrs. Smith," and she replied, "Oh, yes, very intimately, but how do you know?" The photographer blurted out, "I recognized the waist." This happened a few years ago, but neither of the customers has ever appeared in his studio since.

AS WILL be seen from our advertising pages, Howe & Hall are offering a prize for the best picture made on Colorprint, the new process for printing in color.

PICTORIAL COMPETITION No. 87.

Every year the domestic animals' competition becomes more popular and a much higher grade of work is submitted. So close was the running in this competition that each prize was awarded by a bare majority vote in a group of five judges. The following are the awards:

First prize.—Mrs. Sarah W. Holm, 406 East Erie street, Chicago.

Second prize.—William S. Rice, 530 North Commerce street, Stockton, California.

Third prize.—Gust Horlin, 5937 South Halsted street, Chicago.

Special mention.—Charles Vanderfelde, R. E. Weeks, A. H. Moberly, Charles Turpin, C. M. Whitney, John M. Schreck.

PARTICULARS OF WINNING PICTURES.

First prize.—Details of exposure forgotten. Print is a mercury-toned platinum.

Second prize.—Made July 25, at 9:30 A.M., with No. 1 pocket kodak on Eastman film; exposure a snap. Enlarged on bromid paper.

CRITICISM.

The judges rarely tell me the reason for their decision, and sometimes I don't agree with them, and so the comments that I make simply tell what I see in the pictures; and if in this particular competition I express a higher appreciation for the second-prize picture than I do for the first, it does not necessarily follow that the judges are wrong, it simply means that I have a different opinion.

The first-prize picture has very fine tone quality throughout. The scale in which it is pitched is a very short one and the photographer has rendered it very finely. The moment of exposure has also been very happily chosen, the grouping of the cows having that variety in arrangement that is so essential to pictorial quality. I have but one fault to find, and it is this, that the head of the nearest cow is not sufficiently separated from the one behind it; in other words, there is a lack of separation or planes, that quality which is so vital in

the making of a good picture. The cow on the left is admirably handled; in fact, I have rarely seen a bit of foreshortening in photography so good as we find it here.

What constitutes a picture? I am often asked, and in reply I fall back on the famous definition that "Art is nature seen through a temperament." It takes many years to thoroughly appreciate the force of this definition, but if we realize that most of the objects in

successful in the rendition according to artistic standards, why, he has made a picture. Herein lies the interest of the second-prize picture. The objects of nature before us are familiar to every one, but here was an occasion when a most unusual concourse of conditions produced an uncommon effect which was happily seized by the photographer; this is where his temperament came in, and I personally have to thank him for the pleasure he has given me in per-



Gust. Horlin,

Chicago.

THIRD PRIZE.

nature are inanimate and look the same practically to all men, but that at times there comes a peculiar atmospheric effect which is apt to appeal to, perhaps, one individual so constituted that he is able to appreciate it, then, if he has the ability to record the impression as he saw it, as it is almost his bounden duty to do for the sake of his fellow men, that they also may get a glimpse of the wonderful charm that existed for the moment, seeing it through his eyes, and if he is

mitting me to see it through his eyes. I fancy no one will find fault with the composition, because the grouping of the sheep is very effective. This picture, however, is one of these where one's idea of it is apt to change with the moment. For instance, if one were very particular the background and direction of the light might not satisfy. To explain the point I am about to make, let me draw attention to the fact that all nature turns to the light. The branches of a tree on the edge of a wood all

grow outward and in the same way we human beings instinctively turn to the light, excepting when, as in the case of the sun, it is too powerful for us. Very many photographs, both of landscapes and portraits, that are submitted to me are very faulty in this respect, because the maker turned his subjects to the dark. Let my readers cover up the group of dark sheep on the left and consider the balance of the composition by itself; the shadows on the ground show the source of light to be behind, and the softening of the hills gives the same effect so this part is harmonized. Now, cover up the other parts and study the dark grouping of sheep on the left. The source of light is behind as before, but the sheep are apparently coming out of the dark so there is conflict, and herein lies the one fault I have with this picture.

The third-prize picture shows this conception of moving toward the light very well, indeed. The grouping is natural and varied and all the animals are well knit together. The feeling for distance is very good, particularly the decided separation between the middle foreground and the middle distance.

F. DUNDAS TODD.

FUTURE COMPETITIONS.

Competition No. 89 — Branch of a tree with leaves, with special consideration of decorative effect. Closes August 31.

Competition No. 90 — "At Home" portraiture, that is, portraits not made in a studio. Closes September 30.

Competition No. 91 — Snap-shot pictures. Closes October 31.

Competition No. 92 — Landscapes. Closes November 30.

Competition No. 93 — Flower pictures. Closes December 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the sender's name and address, *but nothing else*. The outside of the package in addition to our address may bear that of sender. Accompanying, a letter or

postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given; also the printing process.

2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

3. Prints are not returnable.

PRIZES.

First — Books to the value of \$5.

Second — Books to the value of \$2.50.

Third — Books to the value of \$1.

Any books, on any subject, or, if preferred, any article we can buy in Chicago.

PROFESSIONAL PORTRAIT COMPETITION No. 18.

In my estimation, this has been the closest competition yet, and it was with great regret that I had to turn down at least four of the prints and say they were not inside the prize list. All excelled in technical excellence and it was very evident that most of the competitors have followed very closely my ideas regarding what constitutes a good portrait. In my brief criticisms I mention the reasons that influenced me in deciding that certain prints were outside the prize list and my readers will probably derive some little profit by making note of the points that I there raise.

Where technical excellence is to be found in every print, where careful consideration has been given to lighting and the harmonizing effect of backgrounds, and where composition is all in all very good, it necessarily follows that the decision will be largely based on the photographer's ability to render character. It is because, I think, he has caught the character of the individual that I award the first prize to Fred Jukes, of Rawlins, Wyoming. We all know that our Western territory, from the very nature of things, is one where the inhabitants are more liable to great uncertainties than in more settled communities. In the bright lexicon of youth there may be no such word as fail, nevertheless, in a new country a man is not infrequently down, though not out. It is because, I think,

Mr. Jukes has considered his sitter to be this type of a man and has successfully rendered him such that I place him first. At first glance, one might be tempted to think that he had posed the face against a rather dark background, but a glance

man; that no matter how murky the atmosphere, no matter how black the past, yet could look hopefully, nay cheerfully toward the light ahead. One feels that in the solid brow above the keen eyes there is sufficient brain working



Fred Jukes,

FIRST PRIZE.

Rawlins, Wyo.

at the expression and a close inspection of the eye evolves in one's mind a new thought, for here is a rather optimistic, if not daring, individual — just the type of a man to keep his feet in times of trouble. I feel as if the photographer wanted to tell the world that he was a

coolly to prevent the owner ever getting into a fit of the blues. I want to draw particular attention in this portrait to the magnificent feeling of solidity by which it is characterized. Everybody knows how seldom one sees a first-class result with this form of lighting, but

here we have a head in which the successive planes of cheek, nose and distant temple are beautifully defined and blend into each other.

I am certain my readers will learn with regret that it is probable we will not hear again from Mr. Jukes for quite a long time. In a letter, recently to hand, he says:

I am going to the coast for a year to take up an at-home-portraiture proposition with a friend. One thing I will much regret, and that is my having to drop out of the portrait competition. You have no idea what an inspiration it has been to me. Of course it has helped me a great deal in my work, but it has brought, too, longings which I can hardly hope will be fulfilled. It may sound odd when I say it has been the means of my feeling what it is to be without a good education, something I never gave a thought to before. I realize now how handicapped I am. Not that I feel at all discouraged, for I hope to better my condition, though it may be a long time.

As to my getting out of photography in order to make a living, I hardly know what else I could do, and I am now so in love with the work that I would not be contented at anything else; and yet I never expect to make more than a good living out of it. I have worked in sawmills, put in two years at the machinist trade, fired locomotives, worked twelve hours a day in front of an open-hearth steel furnace, and one summer was brakeman on the Pike's Peak cog road. The best money I ever made, however, was selling tickets for photographers, and no one knows any better than myself what it does to the photographer. None of these have suited me as well as the work I am now at.

While considering complimentary remarks, let me also quote from another photographer who, by the way, is not in the prize list this month, although he is a competitor. He says: "I did not enter anything in May or June, as I was preparing for our State convention, but I want to tell you I find it harder work to win the first prize in your competition than to carry off the same award at our State convention. I noticed also another of your pupils was a prize-winner."

The second and third prize-winners are very close to each other. Both of them adopt almost the same scheme of lighting and both produce a very fine result. Mr. Muntz, I think, makes a mistake in having the light patch

against the dark side of the face. Mr. Godfrey does the same thing, but with less hurt. On the other hand, the latter gentleman has a very awkward line on the far-away shoulder and he loses entirely the line of the near shoulder, with a resulting pose that is not satisfactory to me. As between the two, I place Mr. Muntz second and Mr. Godfrey third.

I am still at work planning a definite scheme of competitions for 1906 and have drawn up quite a series of contests in which special attention will be directed to some phase of composition or lighting. All through I am striving to make the competitions such that the photographer will have to work for a definite result and his success will be measured by his closeness to the aim.

BRIEF MENTION.

Greene.—A very fine piece of work in which I find only one flaw. The child is apparently standing on a sandy beach, but he holds in his hand a very delicate drawing-room ornament, which mars the picture.

Borri.—At first glance, a beautiful piece of work, still not satisfying. The cause is the result of "twisted" lighting, a frequent occurrence these days when photographers are using small screens to subdue strong local lights. Your lighting is from the left, but the left sleeve is just as dark as the one in shadow. This little point is worth the consideration of every photographer.

Page.—Technically, very fine; tone also excellent, but I do not like the back line of figure. The curve is beautiful, but the subject is not supported. You ought to indicate the edge of the seat and the object on which she is leaning.

Berkemann.—That your work is technically good, goes without saying, for it always is. You have handled a naturally strong face very happily, but the helpless character of the hands is entirely at variance with the firm pose of shoulders and head, and so is unsatisfactory.

Leonard.—Every line of body and chair runs in the same diagonal direction, so that there is no visible means of support to the sitter.

Heidrich.—You are aiming high, which I am glad to see; but you lose quality on the right cheek, which lacks roundness.

Robson.—Excuse my bluntness, but you know nothing. Invest in Inglis' book on lighting and my little book on composition, the two together will be sent for 50 cents.

No name — Lady with Rose.—Pose is fair, but your technical work is indifferent. For instance, your high lights are all choked up: this is specially noticeable on face and bust.

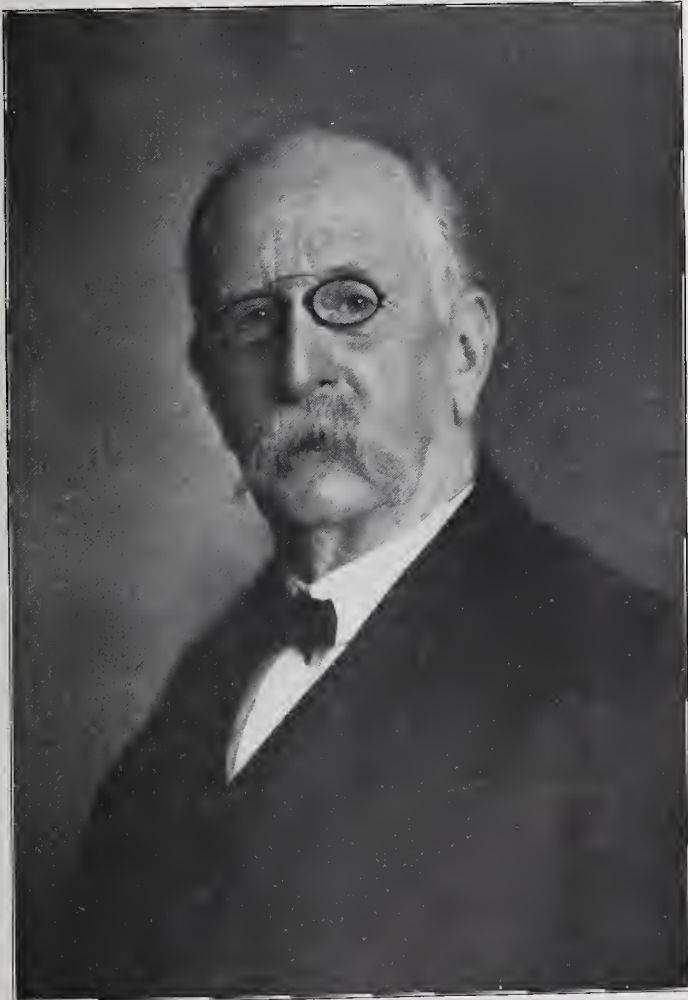
F. DUNDAS TODD.

RULES.

1. Only one print to be submitted in any one month, and this must be from a negative made in the ordinary course of business within sixty days of the date it was mailed.

2. The pictures will be judged on the first day of each month, and all prints received prior to that date will be included.

3. Requests for private criticism, accompanied by fee of \$1, may be sent along with the print and will be answered after the judging is over.



G. K. Mantz,

SECOND PRIZE.

Zanesville, Ohio.

REMINISCENCES AND RAMBLING
RECOLLECTIONS OF EARLY
PHOTOGRAPHIC TIMES.

CHAPTER VI.

EMBRACING A PERIOD FROM 1839, ETC.

The first international exhibition, the great one of 1851 in Hyde Park, London, was initiated by His Royal Highness Prince Albert—Queen Victoria's consort—a warm patron of the arts. The photographic section of that remarkable exhibition showed the capabilities of photography. Splendid specimens from many quarters of the globe were exhibited by most of the processes then known. Messrs. Ross & Thomson, of Edinburgh, were the only photographic exhibitors in the British section of photography by the albumen process and the writer took great pleasure in examining these at different times and hearing the favorable remarks by visitors like himself.

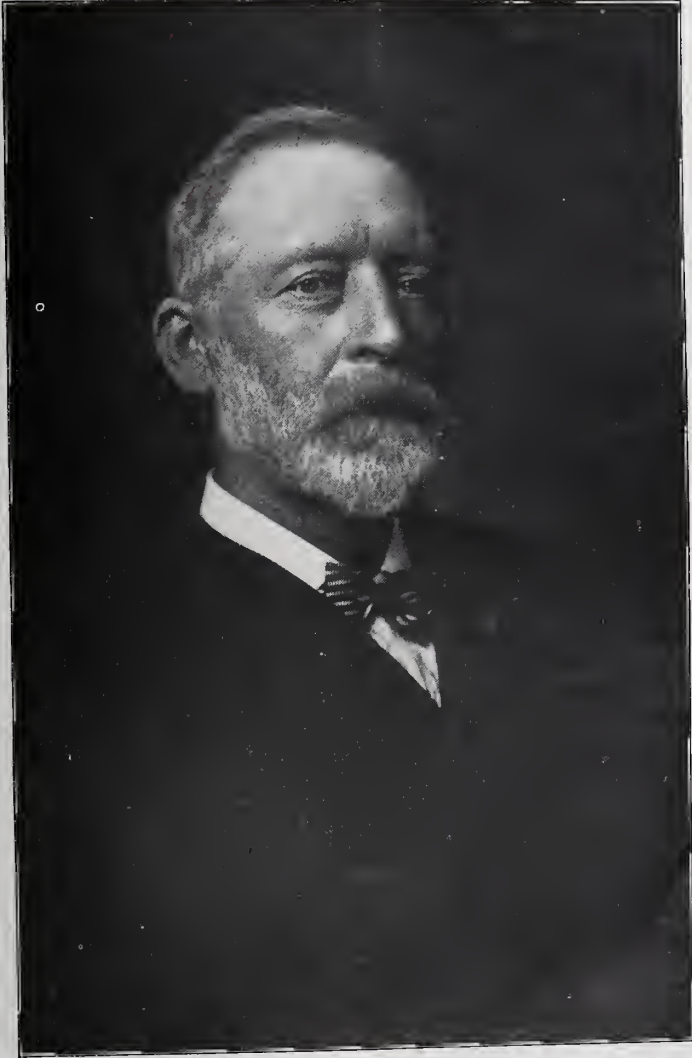
The council of the exhibition awarded a medal to Ross & Thomson. It may interest modern photographers—or readers—to know the high position to which the Talbotype had attained, especially in Scotland, about 1848, onward and to have the opinions of the highest authorities, artistic and photographic, of the quality of the work then produced by Edinburgh photographers. I quote from the reports of the juries of the great exhibition of 1851: "Ross & Thomson have exhibited several beautiful Talbotype pictures, consisting of views from nature, interiors, groups, etc., and they are the only exhibitors in the British section of photography by the albumen process, which in practice they appear to have carried to a high state of perfection. . . . In addition to the extreme clearness observable in the details of their landscape scenery, and the great delicacy of their delineation of objects in general, we may take notice of the excessive *beauty of the tints* which their works exhibit. Not only are the shadows deep and Rembrandt-looking where suitable to the effect required, but the middle distance displays a beauty of color nowhere equaled, except in the French depart-

ment. . . . Indeed, the beautiful and extreme delicacy and variety of tint, the aerial perspective, in which the background is made to recede by imperceptible gradations into the horizon, all amply attest the power of Messrs. Ross & Thomson. A number of other Talbotypes also exhibited display equal variety of tint, and a depth and richness of tone without any straining of effect."

I remember one occasion after completing several views of seascapes, I dropped in at my friend Mr. Hughes' place, found him busy in his astronomical observatory situated within the grounds of his residence and commanding an uninterrupted view of sea and sky. He called me upstairs and I made my way into the apparatus room, which was well appointed with many conveniences, and full of magnificent instruments, optical appliances, chronometer clocks, etc., and in the center a vast telescope over twelve feet long and about ten to twelve inches in diameter, and near by a grand transit instrument—which had been made for the Emperor of Russia of that time—but as some other movements were wanted, another instrument was supplied and this one being thrown on the market for sale was purchased by Mr. Hughes. It was a remarkable and fine instrument. The large telescope was inclined upward through an orifice in the roof, it being the usual dome shape and capable of revolution, so that the whole hemisphere of the heavens could in turn be examined. It is here the work of observation has to be performed during the silent watches of the night, work which may seem simple to the casual observer, but who can tell the many countless watchings, the fortitude and persistent activity by which the triumphs in astronomical discovery have been gained? Mr. Hughes remarked to me that photography would soon become a useful and necessary element in astronomical observations, and in recording them. Personally, he had no time to work out his ideas in regard to these matters, but we now know the important part which photography has played in astronomical research in the

years that have followed. His interest in optics and lenses kept him busy working out curves for large apertures of different focal lengths for telescopes, etc. About this time Mr. Davidson, the

him with the best optical glass required for their operations, indeed, later Mr. Davidson was almost wholly employed by Mr. Hughes, and they were frequently together and, doubtless, ex-



E. G. Godfrey,

Waukegan, Ill.

THIRD PRIZE.

Edinburgh optician, had made many photographic lenses, and he was well known among photographers. I introduced him to Mr. Hughes and he became interested in him, gave him a good deal of work experimenting, furnishing

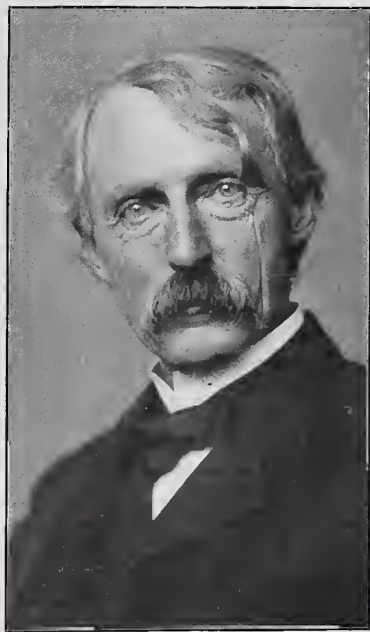
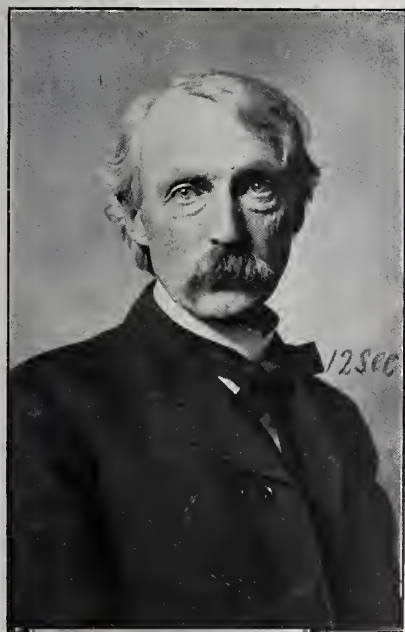
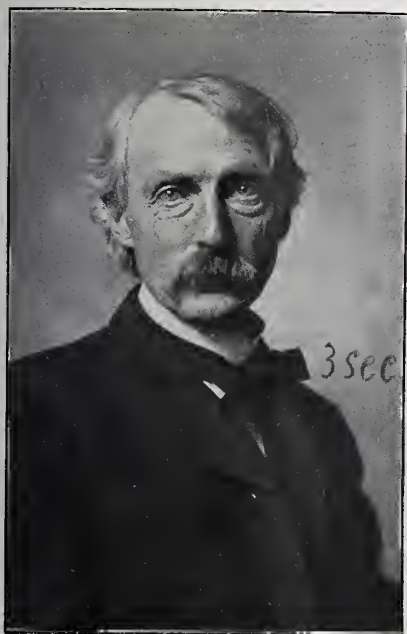
changed views in regard to working out curves, so as to be as free as possible from spherical aberration, curvature of field and astigmatism, etc. I had been experimenting by this time with lenses by Leraborn, Steinheil, Voigtlander,

Chevalier, etc., which were considered the best for photographic purposes, but many pictures which I had taken with my own Davidson lens were quite equal to most of the pictures then appearing. My Davidson lens was constructed according to his method and he expressed his conviction as to the value of having such lenses in sets, for various purposes. The portrait combination consisted of front and back lenses, each cemented, thus having the fewest reflecting surfaces that a lens can have, and ensuring the least possible loss of light from reflection of surfaces. The front lens would be, so far as I can remember, about 14 inches focus and the inner lens about 21 inches focus; the focus of the combined lenses about $6\frac{1}{2}$ inches. Suitable for half-plate pictures. They could be reversed in the tube and give a larger picture by being thus reversed, or if need should be, the 14-inch focus lens could be used for views, etc., and gave a well-covered field and perfect 9 by 7 inch pictures. The 21-inch lens, when used for views, gave a picture 15 by 12 inches.

I well remember our old Edinburgh friend, the late J. Traill Taylor (who made optics one of his specialties), and who afterward was editor of *The British Journal of Photography* for a long period of years (about thirty, I think), in his work, "Optics of Photography," speaking of T. Davidson's lenses, expressed the opinion that they were not rapid enough to compete with Petzval's portrait objectives. This is correct, as far as portrait photography is concerned, but I do not think the matter can be entirely explained in this way. At any rate, the system was dropped and apparently forgotten and the new development of the old idea of the set took its departure from Petzval's portrait system. In 1848, Voigtlander made use of it by reversing the front lens and using it as a single lens with stop in front, and then came modifications by opticians in the mounting of lenses, and positions of stops of lenses, to suit various photographic purposes. Some adopted F. Scott Archer's ideas, which were carried out. A point of impor-

tance — indeed, the chief aim — among opticians at this period in Britain and America was to produce an objective free from distortion, regardless even of spherical correction. These efforts to construct an objective free from distortion produced in America the ratio lens, the invention of the optician, C. B. Boyle, in 1863. It was not said whether C. B. Boyle advised the use of the components as single lenses or not, but it was considered that for the first time after T. Davidson, we meet with an objective expressively described as made of two similar components symmetrically placed at proportionate distances from the stops, a combination we may properly call hemisymmetrical, in order to distinguish it from symmetrical combinations in which both components are identical. It may be remarked that the practical execution of the idea of the set was developed in two directions — first as an entirely unsymmetrical set mostly on the lines laid down by F. Scott Archer, in the second place, as a symmetrical set — as first intended and introduced by Thomas Davidson, of Edinburgh. Thus in many years afterward the old idea of Thomas Davidson is accomplished in a modern anastigmatic objective which yields three objectives of different focal lengths and having the fewest reflecting surfaces possible.

Another example of how nothing is lost in nature and how the recording waves bring back to us impressions formed in early years, how vividly at this time recur to me the impressions imprinted on my memory when viewing the photographs on exhibition in Hyde Park, London, in 1851. Although silver plate and other sun pictures were shown in this exhibition, in some cases with the apparatus for producing them, the collodion process, being hardly yet in practical use, in fact, was only in its experimental stage and known only to a few amateurs, was scarcely employed at all within the precincts of the great building. All the pictures taken by order of the royal commissioners were executed either on paper negatives or albumenized glass, these being the work



Three of the prints show the latitude in exposure and development. They were exposed for 3, 6 and 12 seconds on one plate, which was developed uncut, so that all exposures had exactly the same development. The fourth print shows how lighting may be softened by a slight turn of the head.

of Mr. Hugh Owen and M. Ferrier, respectively, and these were shown in the following year on an occasion which may fairly be described as inaugurating the *first photographic exhibition*. After a descriptive paper read by Mr. Roger Fenton (so well known in photographic circles in those days) at a meeting of the Society of Arts, December, 1852, and illustrated by upward of seven hundred photographs, this collection of recent specimens of photography was allowed to remain on view for several weeks. This was not alone the first public exhibition, but actually led to the formation of the photographic society in the following year, largely through the efforts of Mr. Roger Fenton and his associates. Sir Charles Eastlake, P. R. A., became president and Mr. Roger Fenton, honorary secretary. That the collodion process was actually employed in the great exhibition building was proved by the fact that picture No. 339 in the old original catalogue was a view of the interior of the great exhibition taken by Prof. P. H. Delamotte, and was marked "Collodion"; also, Nos. 238 and 261 entitled, "Down the Transept, Great Exhibition, Hyde Park." Collodion pictures by the same artist, Dr. Diamond, exhibited his well-known "Types of Insanity," and portraits were shown taken by collodion by F. Scott Archer, the inventor of the collodion process; also specimens by T. Sims, F. Horne, E. Kater and J. A. Spencer, but the bulk of the work displayed in the large room of the Society of Arts was from Talbotype negatives, on waxed paper, and albumenized glass.

The Count de Montizon was considered the first to employ collodion in 1852 at the Zoological Garden, and Mr. F. Maxwell Lyte began about the same time and took out a camera with him to the Pyrenees. Paul Pretch sent over some good work (paper negatives) from Vienna and most of the English landscape photographers were using either the wax paper and Talbotype processes, while Messrs. Ross & Thomson, of Edinburgh, made for themselves a great reputation in working large plates of albumenized glass, views of

Melrose Abbey, Holyrood, etc., being shown at the Society of Arts Exhibition. Mr. Fox Talbot sent in a lot of "Early specimens of the art of photography from 1842 to 1846." Mr. G. G. Stokes exhibited a new form of portable camera with hood for changing papers.

PETER DOW.

(To be continued.)

HISTORICAL COMPETITION No. 2.

This competition has not yet caught on so effectually with readers as have our others; in fact, I am surprised that I am not deluged with hundreds of prints from such of them as are not appealed to by the art side of photography.

In this competition, technical qualities alone are considered, therefore I naturally expect that all those who consider such the supreme test of a photograph would take part. I can only suspect that the present lack of interest is due to the fact that the photographic season for the average amateur does not begin until the Fourth of July and, therefore, few of them have a supply of suitable subjects on hand. I therefore hope that our third competition, which falls on September 30, will be favored with a very much larger number of entries than the first and second.

The following are the awards:

First prize.—Wendell G. Corthell, Wollaston, Massachusetts.

Second prize.—Margaret Van Fleet, 220 East Grand Boulevard, Detroit, Michigan.

Third prize.—C. M. Whitney, 153 West Third street, Bayonne, New Jersey.

The first prize is a photograph of the older Quincy mansion, Quincy, Massachusetts, which was built in 1636. Regarding it, Mr. Corthell gives the following quotation:

"Here for more than two centuries has been the home of romance and wit, of beauty, of patriotism and of sublime daring. Statesmen, judges and captains of war were born in it, the 'Dorothy 2' of Holmes' poem first saw the

light in it. John Hancock's Dorothy blossomed to womanhood in it, and Sir Harry Vane, quaint Judge Sewall, Presidents John Adams and John Quincy Adams, John Hancock, Benjamin Franklin, Sir Charles Henry Frankland, and many another known to fame, have shared the unfailing hospitality of it."

The second prize portrays a condition that is now past, but which was associated with the human race for many

three loom shops with, I should fancy, a total force of about fifteen looms, but only two of these were in active operation, all the rest were silent, the former workers all having taken employment in the factory. I remember that I was hired to chop about six of these looms into kindling wood, receiving for the job the munificent pay of 12 cents per loom. In those days a chopping axe was in my hands at least every day, and though I was then but fourteen years



W. G. Corthell,

FIRST PRIZE, HISTORICAL COMPETITION.

Wollaston, Mass.

thousands of years. In the primitive household spinning and weaving naturally fell to the lot of the women folks, yet very few people realize to-day that our two descriptive terms of the marriage condition of the fair sex are really descriptions of occupation, for spinster and wife are simply spinner and weaver. In my boyhood days, the spinning wheel was practically dead, while the hand loom was a vanishing quantity. In one village that I lived in which contained fifty inhabitants I remember there were

old, I considered I was rather slow if I did not reduce the woodwork of an entire loom into the proper size in less than three hours.

The third-prize picture is a photograph of Barton house, on Staten Island, near Newdorp, which was built by French Huguenots in 1670. Mr. Whitney says that in one of the chimneys there is a hole, but that he can not find out its purpose and never saw the like of it in any other chimney.

F. DUNDAS TODD.

KINDLY CARICATURES—J. C. STRAUSS.

No, that is not a nursing bottle which he holds in his hand. It is the bulb by pressing which he closes the camera-shutter and signals that you are no longer to sprain your face in an attempt to "look pleasant." If your endeavor to look pleasant results in such a smile as Caricaturist Bloch puts on the face of his subject, you are sure that the photograph will hardly fail to do you justice for your many sins. Mr. J. C. Strauss, the greatest photographer in the world, did not pose for this picture. His business being to pose others he can not pose himself; the shoemaker's children are rarely well shod. Strauss is an artist with a cynic streak through his kindliness. Why not? What is photography of men and women but a study of their vanity, and what's more wearying than the vanity of other people, even when it does make you a fortune, build you a bijou studio and enable you to charge as high as \$100 per dozen for the photographs? Strauss is a condemned optimist. He has to put a good face on everybody and everything. He is forced to take well with people, even if he has to take all their spare cash every time he takes their pictures. Strauss has to jolly people into looking their best and then he has to improve on that best with a few touches upon the negative. Withal is Strauss no faker, for he does, more than any man of his craft, get character into his photographs. The others generally take out character to obtain prettiness. Strauss has humor and, therefore, he puts some of it in his work, with the result that his subjects are never pictured quite too consciously as being "stuck on themselves." That quizzical look he wears stamps him as the "jollier" *par excellence* and your artistic "jollier" is the man who can put his victims on their best appearance. He has "mugged," as the police say, every distinguished native or resident of St. Louis and all notable visitors and his photographs are as widely disseminated over the world as St. Louis beer bottles, while his studio is one of our "sights" for visitors along with the breweries and the

Botanical Garden, just as the stock yards are the chief show place of Chicago. Strauss has no "airs" in anything but his work. He takes a picture of you that delights all your friends, and all the time he's taking it you feel as if he is guying you for being so concerned with yourself as to think people want your picture. Strauss is one of the city's real celebrities; not, as most of the others, because he has made a lot of money, but because he has character. He is Bohemian in his tendencies, but his Bohemianism is a boost for his business. His studio is a resort for good fellows, with a stein on the table, etc. He is artistic without any ultra seriousness about it, except when he's working. His independence is delightful. Dealing almost exclusively with those who deem themselves some pumpkins and deriving a big revenue from them, he is never oppressed by them. They have to sit up or stand around as suits him, or they may go. They may go to him with their own ideas of what they want, but they take his and think they have had their way. He's a boss, with a dictatorialness that falls happily between suavity and gruffness. And so it is that, apparently not at all striving to please, he pleases — especially the ladies. Every first-class photographer in the United States and Europe knows and likes Strauss, and learns from him. He is at the head of his profession, a fact which seems not to bother him at all, for his seeming chief concern in life is to have a cheerful time and "josh" at the gods and old Time. Photography is his fun as well as his passion and his position is such that he isn't worried by the fact that the photographers of the country to the extent of about ninety-five per cent are merely hired men for the photographic monopoly known as the Eastman Company. Strauss has that Oriental element in him which makes him a good advertiser by giving play to his personality, but he is not a charlatan. His popularity with his rivals, who are very few in the land, testifies to his real worth as an artist. His individuality impresses all those who meet him and makes them his

"boosters," while the individuality he gives his work is remarkable in that it brings out the individuality of his sitters. A Strauss photo is never conventional. It has an "atmosphere," which most photography has not. He is daring in his unconventionality and particularly in his unhesitating application of the method of the painter and draftsman to heighten or soften, strengthen or diffuse the picture-making of his servant sun. This painting quality in his

right. He will have it his way, the right way to his thinking, before done with it and then it is done. He is as whimsical as Whistler and at the same time as careful as a miniaturist, with a shrewdness in handling people that has made them "come again." Strauss doesn't cultivate patrons. He pays more attention to a whole lot of people who can't afford his prices, like the artistic contingent during the World's Fair, writers, men of note but not of



Mrs. Van Fleet,

Detroit.

SECOND PRIZE HISTORICAL COMPETITION.

photographs is their unique distinction throughout the world. His effort is for truth of the inner ego of the sitter rather than for a merely pleasing arrested shadow of that sitter's facial *superficies*. Commercial he is in a way that does justice to the Jewish blood of which he is so proud, but while he gets his price he gives value. He will use up more plates on one sitter than any dozen other photographers. He will work over a sitting all day until he gets it

money, and they being of the world of "the know" have assured the others, the profitable others, that the right thing in photography is the Strauss brand. Probably his best photography is done, as all good workmen do their best, for his own satisfaction, though what he learns therein is put into his work for the public. His supreme vice is that, like a vivisectionist, he practices upon his friends. Strauss is criticised for blending in some of his work pho-

tography and drawing or crayon work, for dabbling in a hybrid or bastard art, but the criticism fails because his results show something that a mere likeness does not show. His pictures of women are remarkable for truthfulness, and yet the women shun him not. That is a triumph. Strauss is the poorest speech-maker and the worst poker-player in the whole wide world, but he makes an inimitable cocktail and he has a man or woman "mugged" and done with before they know it. He gets the money and he gets it from the wisest people. He is not less a hypnotist than Elbert Hubbard in that regard. Strauss is far from being the least of the men who have made St. Louis famous by good work. He is one of the few men you're asked about when you're away from home. And he is one of the fewer still concerning whose distinction in his line there need be no wonder, for he is of unique character as a man in addition to being an originating individuality in an art that is only saved by such as he from becoming mere mechanism and button-pushing and trickery. He leads in his class and his class is the topmost best. He makes it pay—yes and he rather laughs at how easy it's done, and then he likes to put much of his profit into edibles and potables and get a gang of Bohemians into the "Growlery" underneath his studio and—"forget it" in a way to make them all go out at ever-so-much-o'clock in the morning, a band of boomers of the art and heart of Strauss the smart.—*The Mirror*.

SECOND AMERICAN PHOTOGRAPHIC SALON.

The Second Salon of the American Federation of Photographic Societies is now announced. From the secretary we have received a circular giving full particulars, the rules and regulations, method of judging and the names of the various jurors. In expectation that as many frames will be submitted as on the occasion of the First Salon, it was felt that a gleaning process would have to be adopted in order to save the time of the artist jury. Arrangements have

therefore been made whereby all exhibitors may send their pictures to a receiving board near their own home, not less than one dozen of such receiving stations having been arranged for in this country. At these local receiving stations a minor jury will select such work as the members deem to show artistic merit. Such pictures will be forwarded to New York, where a national preliminary jury will select about one thousand frames, which will be submitted to the final jury of selection, which consists as before of gentlemen who are very high in the art world. All frames must be in the hands of the local juries by October 7, or if sent direct to the headquarters, 102 West One Hundred and First street, New York, not later than November 1. We would urgently advise all those interested to at once send to the secretary, William T. Knox, 279 Washington street, New York City, for a copy of the prospectus, in which full particulars are given.

TONING GLOSSY BROMIDE PRINTS.

A magnificent example of the hypo alum method of toning bromids appeared in a continental journal recently, the treatment of which is thus described in the *Bromid Monthly*: The print was on glossy bromid paper, and was developed with ferrous oxalate, fixed as usual and washed. The toning bath was then made up according to the following formula:

Hypo	5 ounces
Hot distilled water.....	30 ounces
Powdered alum	½ ounce
Silver nitrate(ten per cent solution)	70 to 100 minims

The silver is necessary only when making up a fresh bath, as its rôle in the formula is to counteract the reducing action of the new solution, which part it plays by providing silver which would otherwise be taken from the prints. The solution is employed at a temperature of about 100° to 120° F., and will then tone in about twenty minutes. The surfaces of the prints may be cleared with a wad of cotton-wool from any fine deposit which may settle.

HAND CAMERA NOTES.

Just now most of us are more inclined to get out with the camera than "frowst" in the darkroom over bromid printing and enlarging, and beyond developing our negatives leave the dark hole severely alone. Possibly, therefore, a note on hand-camera work may not be out of place.

There are still some workers who never carry a hand camera, and look upon it as a thing of evil and something

but my average of failures is excessively small, at least so I gather from hearing what some other fellows say.

Every man is more or less of a crank, and acquires a particular method of working, and if he does not manage to be able to work in his particular style then he makes a failure of it. Now, that's just my case. I have got into a particular groove and, if by any chance I get out of it, I'm sure to go wrong somewhere.



C. M. Whitney,

BARTON HOUSE, STATEN ISLAND.

Bayonne, N. J.

Built 1670.

THIRD PRIZE, HISTORICAL COMPETITION.

to be shunned. Personally, I believe in them, and never leave home without one. I use one of the collapsible film cameras, quarter-plate size, and I have a big pocket inside my coat into which it easily slips.

I must say that I do not always use it; perhaps, I go out three or four days running and never make an exposure, and then again I may use three or four spools in a walk. Naturally, like everybody else, I do not always get a picture,

In the first place, I entirely ignore my finder, although I have a good one fitted to the camera, and rarely use it except for close work. After some little experience, I seem to know intuitively exactly how much I am going to include, and generally manage to hit my principal object in the center of the plate or just where I want it to fall. Then again, I always use my camera "eye high," if I may coin a phrase, that is to say, I hold my camera up just

level with my eyes and sight over the top or along the side. Even in this position I vary its position as regards my face, for if I want a fair amount of foreground then the camera is held close up to my face, and I know I shall get it; if I do not want so much then I hold it with my arms half extended, very frequently resting it on my left arm, which is bent across my body. To cut out still more foreground my arms are extended at full length.

I often see a man with a hand camera stop and look at a subject, then hold his camera somewhere down about his waist and stoop and peer into the finder and shift and shift about, and yet not seem satisfied, even when he has snapped off. I never yet saw anybody with his eyes in his waist, and yet this is practically what it comes to by holding the camera down there. When you see a pretty bit you, as a rule, see it from your normal height, and to lower the point of view two feet or more entirely alters the look of things.

Those who do not believe this should try it for themselves the next time they are out, by first examining a scene standing upright and then by crouching down on their hams, that is lowering their eyes two feet. In some cases the effect is extraordinary.

Another fallacy in hand-camera work is the use of high speeds. I have often seen an amateur take a snap-shot of a church with a shutter working at a twenty-fifth of a second, and in a poor light, too. I guess the church isn't going to run away. Of course, high speeds are all right and useful, but there are precious few pictures that want less than a tenth or fifteenth of a second, and these are my working speeds.

Movement? No, I don't get any. I can hold my camera steady for a fifth and so can most other people with care and a little experience. The most likely cause of movement is in the release of the shutter: every shutter wants learning and humoring, but a little experience and care go a long way. One advantage in using low speeds is that the lens can be stopped down if required,

but the greatest advantage is that your film is always well exposed and comes up nicely in the developer, showing good detail in the shadows with softness in the high lights.

Another great fault in hand-camera work is in prolonging the development in order, as it is hoped, to get detail out in the shadows when the film has been underexposed, and the result is a hard black and white negative that requires a lot of dodging, and that will only give a passable print on bromid paper, even with a lot of dodging. Avoid bromid in your developer and do not develop too long; you can not force out what is not there, and a soft negative can be printed from on any paper, while a hard one is a hard job at the best of times.—*The Bromide Monthly*.

H. GEORGE.

SHADING DURING PRINTING.

"I have three or four negatives," writes a correspondent, "which have clouds distinctly visible in them, but the aforesaid clouds do not print out usually. By placing the printing-frame on the ground at the edge of the shadow of the side of the house, and shifting them into the shadow again as soon as they are fully uncovered, I make Sol do my handwork for me. The part to be most printed, the sky, is, of course, put where the sun first reaches it. The frames should be far enough from the house for the movement of the shadow to be fast, so that they are quite uncovered in three or four minutes."

TRIMMING PRINTS WITH A KNIFE.

We are generally told if we trim prints with a knife to do it on a sheet of glass. I did so for years and ruined I do not know how many knives in the operation. Then one day I had no glass and used just a smooth piece of common thick cardboard on which to cut. The result was such that I shall never go back to glass. The cut is just as clean, while the knife keeps sharp eight or ten times as long.

W. G.

MICRO-ORGANISMS OF STARCH PASTE.

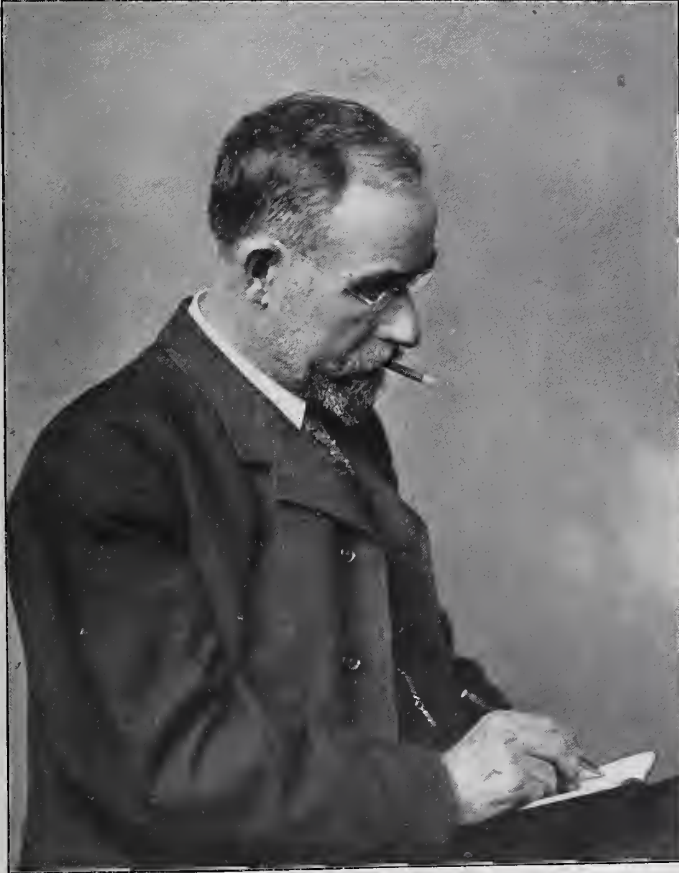
Starch paste being the most popular medium for mounting photographs, the causes and effects of the decomposition of this mountant may prove interesting to photographers.

The chief objection to the use of starch paste is that it rapidly deterio-

batch of prints. Other mountants besides paste turn "sour" when kept for any length of time. Gum and glue, for instance, become acid when stored in solution, but in these cases the adhesive properties of the substances remain almost, if not quite, unimpaired.

INFECTED PASTE.

The reason of the inferior keeping



WHAT SEVEN PHOTOGRAPHERS DID TO THE EDITOR.

rates when kept for some time, unless some disinfectant is added as a preservative. When starch has become stale, a considerable portion of its adhesiveness is lost, and it becomes in course of time practically useless. On account of this objectionable feature of paste, text-books always recommend the preparation of fresh mountant for each

qualities of paste is to be found in the fact that starch has a great attraction for certain kinds of both animal and vegetable organisms of an exceptionally destructive nature, and when a few wandering spores or germs alight on the paste, decomposition progresses very rapidly indeed, unless a preservative has been added to the mucilage.

When paste is prepared just before use, and the surplus thrown away, no chance is afforded for the cultivation of germs. When, however, as in many business places, the paste-box is always in use, being merely replenished from time to time with fresh paste, a fine opportunity is given to study the growth of what are known to microscopists as "paste eels" and the rapidity with which they turn the fresh paste to a slimy mass with an unpleasant appearance and odor. Generally speaking, the cause of the deterioration of the paste is not known to those who use it, and they are not aware of the fact that the paste-box is thoroughly infected with the aforementioned paste eels. When the contents of such a box is examined closely, it will be found, if the surface of the paste is viewed obliquely, that the whole of the mass is in constant motion, the animals themselves are too small to be seen individually with the naked eye, but the incessant activity of the mass of eels causes a slight flickering of the light that is reflected from the surface of the paste.

A very similar "eel" was formerly very commonly found in vinegar, but owing to the presence of a small percentage of sulphuric acid, and also to the absence of mucilage, in modern vinegar, this interesting animal is now rarely found. It is several years since the writer last saw some of these animals in a sample of vinegar, and several attempts to colonize some paste eels in vinegar were a complete failure, owing either to the fault of the animals, the vinegar, or the experimenter.

PASTE EELS.

These animals were at first classed with the infusoria, but subsequently placed with the nematoid worms and termed anguillulidæ. The paste eel is known as anguillula glutinis. The anguillulidæ are small (from 1-100 to $\frac{1}{4}$ inch in length) transparent worms, and various species are found in wheat, moss, water weeds and damp places generally. One of the chief characteristics of these animals is that they are

extremely tenacious of life. If the paste or any other substance they may inhabit is dried up, they remain dormant and apparently lifeless for several years, reviving immediately they are brought into contact with water. One observer claimed to have revived some specimens of anguillula after twenty-seven years quiescence.

The writer kept a piece of dried paste for three years, and the eels revived at once when a portion was placed in water; but a further trial of the same paste being made two years later, the occupants it was found would not be resuscitated.

The word "dormant" hardly expresses the total absence of all evidence of vitality in the anguillulæ, when there is no moisture in their habitat, as that term is always associated with a continuance of the actions of the internal organs, however sluggish those actions may be; but in the anguillulæ all internal motion ceases, and organs of the animals remain in exactly the same condition during the period of quiescence, and the writer could not in the case just mentioned observe any loss of vigor or substance after three years' desiccation. The eels are not exterminated by freezing, but become as active as ever when the temperature of their environment is raised above freezing-point. Under these circumstances, it will readily be understood that when once they have established themselves in a paste-box they are not easily ejected, and although only an infinitesimal quantity of dried paste may remain, that is quite sufficient for all purposes, and eels will soon be wriggling over the whole surface of the paste when the box is replenished.

J. I. PRIGG.

—*The British Journal of Photography.*

THE Academy of Science and Art, of Pittsburg, announces that a photographic exhibition will be held in connection with the photographic section from September 15 to 23, 1905. For particulars, apply to J. M. Conners, Shetland and Finley avenues, Pittsburg, Pennsylvania.

THE BUSINESS AS WELL AS THE ARTISTIC SIDE OF PHOTOGRAPHY.

(A paper by C. J. Van Deventer.)

MR. PRESIDENT AND FRIENDS,—When I selected my subject, "The Business as Well as the Artistic Side of Photography," the thought struck me that this is a subject that we can get a great deal

out of, and I believe it is something that we very seldom discuss at our conventions. What do I mean by the "Business side of photography?" I mean the money-getting side of it; making all the money that you can, out of your artistic efforts. Most of us are "long on" the artistic and "short on" the



A "MINOR CONVENTION" PORTRAIT.

Referred to in leading article.

business side. It is no crime, when people come in at \$4 per, and the next day when they call for proofs and you show them what an artistic thing it will make in this style at \$8 per dozen, or this other style of finish and mounting at \$10 (a style, by the way, that you had in mind when you made the sitting), and that you feel sure they would like if they could only see them finished in that way, and you succeed in getting the order for the higher-priced work. This is what I call the "business side" of it.

I believe the business side of photography should begin when the patron comes into your office. There they should be met by the highest-salaried person in your employ, the reception-room lady, who, if she be tactful and a good saleswoman, will more than pay her salary in advanced prices over what they intended to spend when they came into your place. I have heard a great many discussions as to whether it was best to begin with your low-priced work and show that first or whether it was better to show the higher-priced work first. I believe in and pursue the latter course, showing my higher-priced work first; of course sizing up my customer, and if you are a close observer, you can judge very closely as to what priced work they will stand for. And when they are sent to the operator, make the best there is in you, no matter what the price, but make the price high enough, even on your cheapest work, so that you can give them good service and this service will bring you another customer or drive one away, dependent upon the product that you deliver to them. Don't be stingy with your plates and allow so many for such and such priced work. I never know how many plates I am going to expose when I go under the skylight. Don't misconstrue my meaning; I don't mean to be careless and wasteful, but don't stop just because you have made two or three exposures. For instance, I have frequently come to the point where I was apparently finished and would stop to talk for a few moments with the sitter, when he would unconsciously fall into an easier and more natural pose. Then

I get busy and make that and possibly another negative, always having a supply of extra holders on my camera. Nine times out of ten that will be your best seller.

I believe a great many of us are careless about our clerical and book work.

I have had photographers tell me they never keep books. How in the world do they know how much business they are doing? I once asked a friend how much business he did in a year? His answer was: "Gee! I don't know." I knew he did a good business, but he did not know in dollars and cents. I know what I have done, the first of January, every year. I want to know if I am solvent or otherwise. If business has not done as well as I think it should, I want to find out what months were short; the conditions that made it so; and if I am at fault, correct it. I keep a "stock-house account" and see that my books balance with theirs. If you discount your bills, that is more of the business side of photography, and is more money in your pocket.

Last year I put in the "card-index system" for all office work that we can use it for, and find it a great time-saver. I did not like the stock cards as published by the manufacturers, so I figured one out for myself and had it made by the Yawman & Erbe people, of New York, and it fills the bill. I have a few of them with me and shall be glad to explain to any of you how I use them.

No doubt, all of you have the trouble of sitters not reporting on their proofs. This is where the card system makes itself useful. My cards are all kept in a certain compartment until the proofs are returned and negatives named. The first of each month I go through these cards and if there are any over thirty days old, I write them a nice note on the typewriter, saying that they had a sitting on such a date and if they were not pleased I would be glad to give them another sitting. If they do not reply or make an appointment, the next month I send a bill for services for so much. If they do not respond, the next one I send is qualified, "If not paid by," a certain date, "this bill will be placed

with my attorney for collection." That brings them. That is more of the "business side of photography."

Another proof trouble is, their not returning all the proofs. This is a thing

jar of toning solution in the house, and it is so easy to tone the extra proofs, and you lose the extra money. Of course, you will have all kinds of argument put up for a while. They will say



A "MINOR CONVENTION" PORTRAIT.

Referred to in leading article.

that we positively enforce. I stamp ALL proofs saying, "All proofs must be returned to the office, otherwise they will be charged for." There is scarcely a family in your city that does not have a

that "you used to let us keep the proofs that we did not order from," etc., but you can tell them that you put in a new system of filing all proofs in order to check mistakes in the order, should

they occur. And it is a good idea to do this, too. I keep my proofs for nearly a year, and then destroy them. I sometimes send out children's proofs, when I have several of the same child, mounted in combination on the same card, or a piece of coarse paper so that you can fold it up. This helps to get a few extra dollars from this class of work.

I may step on some one's toes when I say "Don't monkey with ticket schemes and their canvassers." Now, don't blush. You have all, perhaps, been "up against" this proposition. I have, but thank goodness, only once, and I swore that it would be the last time, and I stuck to it, and am still in business. No telling where I would be if I had stuck to the tickets. Now, I believe in "going after business," but on business principles. Don't you know they are making business advertising a science, and some of the highest-salaried people of the large commercial concerns are their advertising managers? Why can't we use some of their methods in our business? We can, by sending out dainty booklets and other advertising matter to our patrons, calling attention to something new. If you haven't something new, get busy, make something different and call it new. I have an annual Easter exhibit about the time the milliners get through with their "stunt." I frame up and get ready the good things I have made during the past year, and exhibit them. Get out the "swellest" invitations that your printer can furnish you. Get the people into your place. Let them see what you can do, make them talk about you, and you will get their patronage. That is the "business side of photography."

Sometimes you meet some one socially, or a business friend who says he is coming in some of these days to have some work done. Get busy, he brought up the subject. It's "up to you" to get the business. Make an appointment with him right there, at a time suiting his convenience. If he fails to "show up," you have a right to keep at him till you land the business.

Don't worry about your competitor.

Don't try to get his business, make business for yourself, then try to hold it by making your work and your word good to your customers. Be a representative man in your community. Let them know that if you *are* a photographer, you are just as good as the "other fellow." One of the best ways to do this, is to keep your credit good. A business man will respect you more for this than for all your other good traits. If you have a business or commercial club in your city, join it, and show the other business men that you want to be identified with the welfare of your community. I am a charter member of our Chamber of Commerce, and know that I command the respect of my business associates, even if I am only a photographer.

I was talking to a friend the other day, whose daughter had attended school for several years in one of our larger cities. She wrote him that she wanted some photographs made, that she might send one home to mama. She went to a man whom we all know has a national reputation. She ordered a dozen at \$18. When the proofs were sent to my friend there was also one about eight by ten inches, and he says the photographer wrote him such a nice smooth letter saying the young Miss looked so sweet that he just could not resist making a larger one of her and, perhaps, he might want some of them. He would only charge \$100 per dozen for them, or one copy at \$15. My friend said that "he wrote such a nice letter that I just wrote him a check for the extra fifteen." Now, that is that man's business side of photography. Of course, he wrote a nice letter. That man has an efficient corps of business-getters in his office. That has been the secret of a part of his success. He is not only a good workman, but he does not forget the money side of photography. Now, when you go home, think it over. See if you are putting enough business methods into your business. Do you buy your stock as the merchant would? Do you watch the leaks as you should? Do you display your work so as to create the demand it should, and do you get the prices that you should?

AN EASY METHOD OF PRINTING POST CARDS WITH BORDERS.

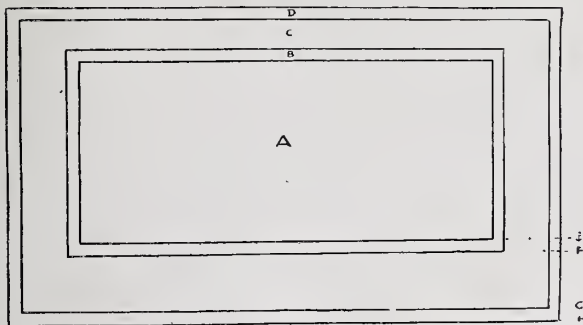
The effect of a post card is greatly enhanced by suitable placing of the picture upon it. A card of this kind is more acceptable to one's friends, perhaps, from notions of the difficulty of doing them, if for no other reason. Difficult, however, they are not, and I feel that a clear description of my method is more of a task than the actual practice of it.

To begin with, the following articles will be required: Some thin opaque paper, black needle paper for preference, but ordinary brown will answer equally well so long as it is opaque, and not too thick—a very hard black lead-pencil, some white ink, a 5 by 7 glass cutting shape, a fine pen, some white tracing paper, and some good gum or freshly made starch paste. That is all, and an outlay of a quarter will purchase a sufficiency of each to go a very long way. The white ink I make by adding water to prepared chalk, with a few drops of gum, until it flows easily.

Say we want cards with a panel view in the center, a narrow white border immediately next to it, a wider and



out its exact size by running the hard pencil heavily round the edges several times so as to cause an indentation of the lines on the under half of the paper.



lightly or darkly printed one next to that, and a narrow white band outside all, as in the rough sketch. A is the panel view space, B the white border, C the printed one, and D white again.

Take a piece of the needle or brown paper rather larger than twice the size of a post card, and fold it in half. Lay it so folded on a piece of cardboard, and with a spoilt post card as a guide, mark

If for bromid cards, mark over these indented lines with white ink, so that they may be easily seen in the darkroom. Now, using the glass cutting shape as a rule, draw the lines E round the space the view is to occupy, then those enclosing the white border next to the view, F, and lastly those next the outside ones, G. Keep your pencil finely sharpened, mark heavily, and keep the

lines parallel. Now, cut the paper where folded into two pieces, mark them No. 1 and No. 2, and run the pencil over the indented lines.

From No. 1 cut out the view space by cutting round lines E. This makes the view mask. Throw the piece cut from the center away, as it is not required. Now, take No. 2 and cut round lines F, being careful not to go beyond the terminations at the corners. Put this center piece on one side by itself; it will be wanted directly. Cut along lines G with the same care, and No. 2 is then in three portions. Now, take a piece of white tracing paper rather larger than a post card, and lay these three portions on it, *fitting them accurately together, one in the other, as when uncut*. This done, hold the middle piece firmly in position, lift one end and apply a little gum or starch paste to the tracing paper beneath it, and stick it down. Raise the other end in like manner and serve the same, and in the same way also fix the outside border D to the tracing paper, but not the piece in the space C; throw this away.

When dry, lay it on a piece of clear glass in a 5 by 7 frame, adjust the edges of the post card true to the outside lines, and print till the space C is to our liking. Now, take out the border mask and put your negative in the frame with the view mask in position on it, and the card with its edges true to the lines as before, and print in the view. When finished, you will probably be very agreeably surprised. On the tracing paper in the space C and *on the reverse side to that on which the card is laid*, you may inscribe in Indian ink the title of the view, which will print in effective white letters on the dark ground. Or Christmas mottoes may be introduced in the same way. With this one pair of masks a variety of effects may be secured by merely printing to different depths, or with bromid cards exposing for like results. W. J. D.

THE Rev. H. W. Dick, Manchester, England, defines art as "giving objective expression to subjective conception," which is a rather novel definition.

ON DEVELOPING PARTIALLY PRINTED P. O. P.

A METHOD BY WHICH IT IS CLAIMED THAT ENLARGEMENTS MAY BE MADE DIRECT ON P. O. P. WITHOUT UNDUE EXPOSURE.

As it has proved possible to develop up a satisfactory print on P.O.P. when the exposure given to it has only been the one-hundredth of the time required in the ordinary way of printing, it would seem to be possible, without prolonging the exposure unduly, to use the process for enlarging direct on to P.O.P. It is curious also, as he points out, that the bichromate also greatly increases the reducing power of the developer, and so renders it possible to add to it a considerable proportion of acid, which without bichromate would stop development altogether. This acid permits the color of the resulting image to be controlled.

HOW THE FINAL COLOR OF THE PRINT CAN BE CONTROLLED.

The addition of potassium bichromate by itself to a developer consisting of pyro alone tends to give a greenish image, or if the bichromate is increased, a pale green or dirty yellow. If a suitable proportion of citric or of tartaric acid is added, we can get a long range of reds, up to a cherry or even to a carmine color. If, on the other hand, we increase the proportion of pyro in the mixture, the color tends to black. It may be pointed out that very short exposures give results with weak contrasts, and therefore are suitable only for strong negatives, which then yield prints green, black, or of a bluish shade, according to the treatment they receive. A longer exposure, until the deepest shadows begin to be suggested, gives a vigorous warm-toned result.

THREE STOCK SOLUTIONS, AS FOLLOWS, ARE REQUIRED TO GET ANY COLOR.

A
Saturated solution of potassium bichromate.

B
Pyro 5 grains
Water 1 ounce

C
Citric acid 100 grains
Water 1 ounce

From these we can prepare a preliminary bath for the print according to the color we want, as follows:

GREEN.		
Water	1 ounce	
A	4 minims	
DARK GREEN.		
Water	1 ounce	
A	4 minims	
C	10 minims	
BLUE BLACK.		
Water	1 ounce	
A	1 or 2 minims	
C	6 minims	
REDDISH BROWN.		
Water	1 ounce	
A	1 minim	
C	20 minims	
CHERRY.		
Water	1 ounce	
A	1 minim	
C	1 dram	

THE NEEDFUL MANIPULATIONS ARE
VERY SIMPLE.

As soon as the print is taken from the frame it is immersed without washing in one of the above solutions, and is left there for five or six seconds, the operation being performed either in white or in yellow light. It is then transferred without any washing to a dish containing sufficient of solution B, in which it is left until development is complete. If preferred, the prints may be placed on a sheet of glass and the B solution applied with a brush or with a tuft of cotton-wool. At this stage the tone is more or less degraded, and is different from that which the print will have when finished. When development is complete, the print is rinsed in water and placed in a ten per cent bath of sulphite to destroy the bichromate, and is then again washed and fixed in hypo and washed in the ordinary way. The results obtained in this way, says M. Schweitzer, are better than any that can be got by mixing all three reagents, A, B and C, in one solution and applying that to the print, as has been recommended.

It is reported that Eros, the nearest of all the heavenly bodies, with the exception of the moon, has been photographed by means of the Bruce telescope at the Harvard observatory, at Arequipa, Peru.

INTERNATIONAL PHOTOGRAPHIC EXPOSITION.

The following were the only awards received by Americans at the very important International Photographic Exposition at Genoa:

Gold Medal—Salon Club of America.

Gold Medal, First Grade—Curtis Bell, S. C. of A.

Gold Medal, Second Grade.—C. J. Pike.

Silver Medal.—Rudolph Eickemeyer, Jr., S. C. of A.

Bronze Medal.—J. H. Field, S. C. of A.

Gold Medal, Second Grade, for Special Subjects.—J. P. Hodgins, S. C. of A.; Louis Fleckenstein, S. C. of A.

J. H. DALLMEYER, LIMITED, of London, England, makers of the famous "Dallmeyer Lenses," heretofore represented in this country by Anthony & Scovill, have entered the American market direct, and have engaged the services of Mr. F. G. Burgess, late of the Rotograph Company, and previously the traveling salesman of C. P. Goerz.

Mr. Burgess is one of the best-posted lens men in the United States, and we are pleased to hear of his engagement by the Dallmeyer people.

It is the intention of the firm to ultimately open offices in New York city, though for the present Mr. Burgess intends to make a trip throughout the United States and Canada. In the meantime, however, he may be communicated with, care of Post Box 1891, New York city.

IN copying a drawing, etc., where there is not much light, it will be found helpful to rub well a few drops of glycerin, oil, or a little vaselin on the grain of the ground-glass, removing all that is superfluous with a clean piece of rag. This gives a very comfortable screen for this kind of work, or interiors. A compound eye-piece may be used if necessary during focusing.

C. A.

EDITORIAL TABLE

FROM HIRSCH & KAISER, 5-7 Kearney street, San Francisco, California, comes a very -handsomely illustrated catalogue of photographic apparatus and supplies. Readers on the Pacific slope should send for it, as it will be found to be a handy reference book.

FROM the Bissell College of Photoengraving, Effingham, Illinois, we have received the prospectus for 1905-06, which ought to be very interesting to every one interested in this calling. While at Effingham recently we had the opportunity of examining the plant, which seemed to us to be as perfect for its purpose as brains and money could make it, and we can say that the prospectus does not altogether do justice to the actual conditions to be found there. Copy will be sent on application.

BURKE & JAMES, 118-132 Jackson boulevard, Chicago, announce that they have been appointed sole agents for the United States for the Watkins Meter Company, of Hereford, England. The line consists of the Standard Exposure Meter, Bee Meter, Print Meter, Eikronometer, Pinhole Lenses, etc. All these have been much used in England for a great many years and have attained wide popularity and we have no doubt will be very popular here. The Bee Meter is very compact, being practically of the shape and size of an ordinary watch, and retails for the low price of \$1.25.

FROM G. GENNERT, 24-26 East Thirteenth street, New York, we have received a copy of "The Year Book of Photography and Amateur's Guide" for 1905. This is an English publication, which has now reached its forty-sixth volume. The contents consist essentially of an article on "Platinotype" which extends over fully sixty pages of closely printed matter and may therefore be considered as a complete exposition of this beautiful process. The second article deals with "Iron Printing Processes," and for this purpose thirty-five pages are required, and some very interesting facts are given. Those who desire to do a little experimenting on their own account might with advantage tackle "Iron Printing Processes," and find amusement for months. "Press Photography," plentifully illustrated, is considered

in thirty pages and will be found both helpful and suggestive. The fourth article deals with a perennial subject, "The Elements of Composition." Thirty pages are required for this, in which are set forth lucidly with the help of thirty illustrations, the main points of compositions. Altogether this is a very valuable volume and is worth much more than the 50 cents charged for it.

TWO NEW photographic publications are announced as being in preparation. The more ambitious is to be entitled *Salon Work*, which it is intended shall be a magnificent illustrated quarterly of most generous proportions and sumptuous print. Its mission will be to give reproductions of the choicest selections from the works of the world's greatest pictorialists, especially as will be found in the annual exhibit of the American Federation Salon. The subscription to this quarterly will be \$5, single numbers will be sold at \$1.75, but the exhibition number will be \$3. The *Salon Monthly Magazine* will be issued by the same publishers and will cover a similar field as *Salon Work*, but in a less ambitious way. The subscription will be \$2 per year. If both be ordered at once, the subscription price will be \$6.50. Particulars may be had from the Salon Publishing Company, Cazenovia, New York.

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Published Monthly.

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W. H. Porterfield.

FIRST PRIZE.

Buffalo, N. Y.

THE PHOTO-BEACON.

EDITED BY F. DUNDAS TODD.

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THE NATIONAL CONVENTION.

Circumstances prevented my attendance at the National Convention this year, but a few reports that I have received from various channels indicate that in attendance it was probably the biggest yet, somewhere like sixteen hundred people having been there. As there are in all about thirteen thousand professional photographers in business in this country, it would seem that at least ten per cent of them were at the twenty-fifth meeting of the professional photographers of America. Here was a splendid opportunity for a concerted movement for the good of photography as a business proposition, and I have been anxiously inquiring as to what was accomplished at this great gathering.

Brief reports indicate that tremendous efforts were made to give those in attendance a good time with apparently undoubted success. Then papers were read on photography as an art, photography not an art, and how to handle the customer in the reception-room, but one fails to find anywhere any effort made to get down to the bed rock principles of dollars and cents and to put photography as an occupation on a solid financial basis. Outside the ranks of the recognized professions, by which term I mean those occupations where a certificate of competency has to be secured before an individual can engage in the calling, it is safe to say no other body of men excepting

photographers would think of getting together unless it were to devise means whereby they could secure better returns for their product.

It is to be hoped that the new officers of the association will be a little more practical when they come to arrange the program for 1906.

F. DUNDAS TODD.

JOHN CARBUTT.

One of my strongest desires for many years has been to keep in friendly touch with the older men in photography, and it is always with regret that I find my list of acquaintances in this particular class gradually shortened by the encroachments of death. The very latest to join the great majority was Mr. John Carbutt, the pioneer maker of dry plates in this country. Since to know Mr. Carbutt was to develop a great personal love for the man, it goes without saying that I never missed an opportunity of spending a few hours in his company, which occurred at least once a year. On these occasions our principal topic of conversation was the latest developments in scientific photography, in which he took a specially keen interest and from which he derived a vast amount of pleasure, but not profit. He was specially interested in all that pertained to isochromatic photography, here blazing the way for others as he had already done in the past with so

many other photographic processes, for it may safely be said that there was not any form of process photography with which he had not wrestled, and always with the same result — that other men were able to derive great profit from the principles he had discovered and given to them.

It must not be supposed from this that Mr. Carbutt was a disappointed man, because I never met one of his years that seemed to so thoroughly enjoy living as he did. At our last meeting, when he had attained that ripe age of seventy-two he informed me that he had so many new interests pressing upon him that he was having the happiest time of his life, and he was then especially interested in critical experiments with isochromatic photography that they gave him no time for worry on other subjects.

Though Mr. Carbutt did not take much interest in public affairs, he was nevertheless the first president of the Photographers' Association of America, which from a small acorn has grown to the great oak tree of to-day.

Mr. Carbutt was decidedly altruistic in his disposition, a great hindrance to a business man these days, when dollars are apt to be considered the measure of one's success; but, being dead, he is on an equal footing with the multi-millionaire so far as money is concerned, but is infinitely his superior in the wealth of regret and personal esteem that accompanies him beyond the grave.

F. DUNDAS TODD.

BISSELL COLLEGE OF PHOTO-ENGRAVING.

Expansion is still the rule with the Illinois College of Photography, and so a third building has now been added to the plant of this unique institution — the oldest, largest and most successful venture of its kind in the world. The latest acquisition is a very large building, four stories in height, which has been used for many years for educational purposes, and the space at the service of the institution is now more than doubled. Radical improvements are already under way, including the

installation of a large electric light plant, fine chemical and physical laboratories.

The difference between professional photographers and photoengravers is very sharply illustrated in the institutions at Effingham. The photoengravers induced Mr. Bissell to form this school and have guaranteed its financial success for several years to come. In marked contrast, professional photographers have done nothing to aid the photographic school, but instead, have tried to hinder its work. No other body of men would have failed to take hold of such an institution and use it for their advantage, and so the question naturally arises, what is the matter with photographers, anyhow?

PICTORIAL COMPETITION No. 88.

The Genre Competition is always a very popular one. Year by year there is decided advance in the quality of the work, so the most interesting feature of the present contest was not the excellence of the prize prints, great as this was, but the remarkable uniformity of the prints submitted from best to worst. Only a few years ago the first prize would have been awarded to some photograph in the present contest that is not even dignified with the compliment of special mention, and by this readers will begin to realize the difficulty of judging.

Only a very small percentage of the prints submitted were thrown out in the first round. After considerable discussion the competitors were reduced to ten and then the fun began. The first prize was awarded by a bare majority vote and so was the second. When it came to the third prize a deadlock ensued, no less than three prints finding supporters and a majority was not possible, so in the end the judges decided that the only way out was to award the same recognition to each of the three. Special mention necessarily means in this competition a very high compliment and I am certain that many of these pictures will later be found hanging on the walls of salons in this country.

The following are the awards:

First Prize — W. H. Porterfield, 100 Lakeview avenue, Buffalo, New York.

Second Prize — William S. Rice, 530 North Commerce street, Stockton, California.

PARTICULARS OF WINNING PICTURES.

First Prize — Made in June at 8 A.M. in rainy weather on a Cramer Iso. Plate, exposure 1-25 of a second. Printed in Carbon.

Second Prize — Made May 25 on a



William S. Rice,

SECOND PRIZE.

Stockton, Cal.

Third Prize — A. W. Engel, 67 Wabash avenue, Chicago.

Third Prize — Gus Horlin, 5937 South Halsted street, Chicago.

Third Prize — A. H. Moberg, 2193 North Hoyne avenue, Chicago.

Special Mention — John Chislett, W. G. Corthell, J. H. Field, Mrs. Pearce, E. A. Snyder.

partly cloudy day on Kodoid plate with stop No. 8, exposure 1-5 second.

Third Prize (Engel) — Taken on film with 1-25 second exposure with open stop of lens, size $2\frac{1}{2}$ by $3\frac{3}{4}$. Enlarged on Royal bromid to $4\frac{1}{2}$ by $5\frac{1}{2}$.

Third Prize (Horlin) — No particulars given.

Third Prize (Moberg) — Made by

flash-light with 13-inch focus lens, working at F. 8, printed on Eastman Sepia paper.

CRITICISM.

Some months ago I pointed out that Mr. Porterfield was more and more suppressing detail in his pictorial efforts because he had advanced to the stage where he was endeavoring to suggest some abstract quality to be found associated with some of nature's facts. This picture he entitles "Old Ocean's Melody," and it will be observed that he has endeavored to subordinate everything to the rolling waves, which as everybody knows are voicing harmonious chords, part of the great music of the universe. Among my acquaintances I have the great pleasure of knowing a young lady of the tender age of ten. She is a very devoted lover of nature and some of her notions are rather unique. One of her greatest pleasures is to stand on the banks of some deep pool and throw into it handfuls of gravel and listen to what she calls "chords." As a child I have done the very same thing, but never until I met this young miss were my sentiments put into words and I have to thank her for having expressed in definite language a feeling that I was myself unable to formulate. Looking at this picture by Mr. Porterfield, I feel that the boatman is of the same frame of mind as my young friend. The day is dull and dreary, there is no work to be done, but routine has probably drawn him to the boat and now he is vaguely enjoying without definite articulation of his purpose the low-toned melodious tones of the sea, which are in harmony with the low tone of the sky and water. The finest things in the world are to be had without money and without price, if only one has the spirit that can respond to them. This humble son of toil, I feel to be one of my kind of people.

Some years ago a similar idea was pressed home to me very effectively while I was journeying up the banks of the Hudson river, a journey of which I never grow weary, and for

hours I can sit and watch entranced the ever-varying scene as it unfolds before me. On this particular occasion there happened to be in the car about one dozen people whom I sized up as belonging to the theatrical profession. I naturally expected that they, being members of an artistic calling, would be able to appreciate the beauties of the river, but to my amazement they never gave it even a passing glance and they settled themselves down to gossip about the people they knew, in fact they seemed desirous of belittling the artistic reputation of every absent friend. In marked contrast to theirs was the behavior of the sleeping-car conductor who, after his work was over, I noticed sitting on one of the seats and looking out upon the river. I put myself alongside of him and drew him into conversation. Soon I learned that he had been on this run for eighteen months and that during all that time he had closely followed the wonderful river, never once growing weary of it. He seemed to know every nook and corner and would warn me as we approached some favorite little bit of his. I passed with him three very pleasant hours because he was one of my kind of people and I should not be surprised if my theatrical fellow travelers wondered what on all the earth I found in a common, every-day car conductor.

To me the second-prize picture, the title of which is "Watching the Boats Go By," is a very beautiful bit of work. The first thing that strikes me about it is the atmospheric effect, that is, the rendition of planes to which I have referred at considerable length in my remarks on the Professional Competition and so I need not dwell further on that point now. The next thing that I notice is that the subject matter is well held inside of the margins of the print. This is a very important point; in fact in most landscape photographs one finds a line somewhere that leads the eye right out of the picture, but here all the lines and masses that reach the margin are such that they lead one's eye back again. If I might find any fault it

would be with the hat in the bottom part which causes a conflict between the cap of the lady and itself. This hat being covered up, I find that my eye is at once led to the head of the tall figure, then passes naturally to the head of the child, thence to the boat, from it to the houses in the distance and back once more to the female figure. Altogether I like this print very much.

Chicago is not supposed to be a city of

whole story is very simply told with a very few details. The intense light carries the eye at once to the workers, the secondary light shows in the bags the result of their efforts, while on the left the dark figures in shadow almost suggest the hidden hand that reaps the principal reward of their toil.

Quite in contrast to the previous picture we have this little domestic scene, showing how bread is baked in Norway.



A. W. Engel,

THIRD PRIZE.

Chicago.

pictorial possibilities, but our amateurs are very good at discovering that even in a large city dominated by the machine process to the limit, it is possible to find pictorial material. In "Unloading" Mr. Engel finds suitable material and at the same time illustrates the daily routine of conveying a cargo from a ship. There is a wonderful play here of light and shade, the contrasts of which are almost symbolic of the life of the toiler. The

Dealing with material things first we learn that the rye bread is made in the form of very thin cakes, and these are afterward strung on a pole until they are dry. I have no doubt the bread will be palatable, but I have a suspicion that something stronger than "store" teeth would be required for its mastication. There is a vivid contrast between this picture and the one just referred to. Here we feel that the whole fruit of

her labor falls to the worker and there is nothing to suggest any shadow on her life.

There is no more industrious competitor than Mr. Moberg. Business exigencies enforce decided limitations on his sunlight hours and he therefore works in the evening, making most of his exposures by flash-light. His subjects are to be seen in this picture and these he has portrayed in a large variety of ways. I have followed Mr. Moberg's photographic career very closely, watching him develop along the lines of composition, then light and shade, and latterly the rendering of tone, and it therefore gives me great pleasure to see him in the prize-winning class.

F. DUNDAS TODD.

FUTURE COMPETITIONS.

Competition No. 90—"At Home" portraiture, that is, portraits not made in a studio. Closes September 30.

Competition No. 91—Snap-shot pictures. Closes October 31.

Competition No. 92—Landscapes. Closes November 30.

Competition No. 93—Flower pictures. Closes December 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the sender's name and address, *but nothing else*. The outside of the package in addition to our address may bear that of sender. Accompanying, a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given; also the printing process.

2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

3. Prints are not returnable.

PRIZES.

First—Books to the value of \$5.

Second—Books to the value of \$2.50.

Third—Books to the value of \$1.

Any books, on any subject, or, if preferred, any article we can buy in Chicago.

PROFESSIONAL PORTRAIT COMPETITION No. 19.

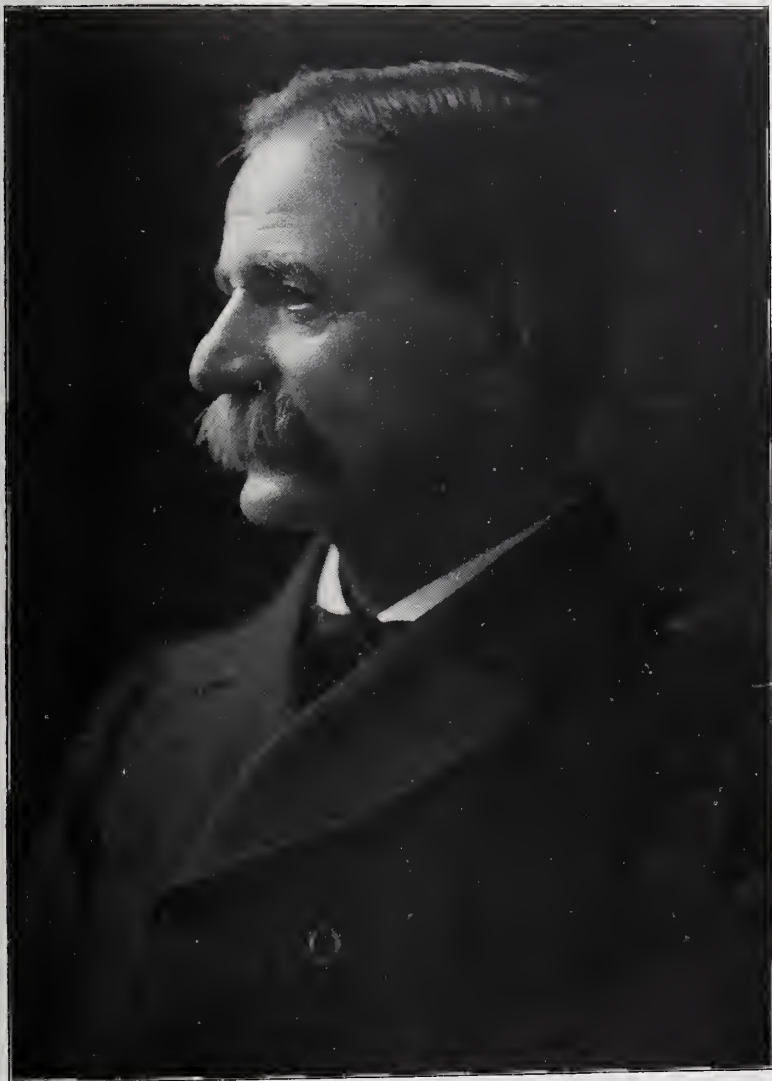
The most interesting feature about the competition this month is the remarkable advance made by Mr. Godfrey, the winner of the first prize, who has made one of the sudden jumps forward which I notice is characteristic of those who follow the contests persistently month by month. Much of my personal fun lies in watching the efforts of a competitor for a few months. Usually the first print he sends in exhibits very little pictorial quality. A large percentage gets such a shock when they are bowled over that they never recover, but a few are rather braced up by the ordeal and start out with the intention of making good. Then for the next few months they seem to experiment with lines, spaces and tones, not infrequently getting results that are even worse than they made before, because their tendency is to overexaggerate everything. In due time, however, they mellow with age and then begins the real advance. Month by month improvement is perceptible and then having assimilated the rudimentary principles there comes the swift forward jump that I have already referred to. Mr. Godfrey is a first-class illustration of this fact and my readers could with advantage look back into some of the previous issues and compare the portrait reproduced in this issue with those he has made before and from the result take sufficient heart to follow his example of entering the contest every month without fail.

The first thing that strikes me in connection with this portrait is the beautiful rendering of planes. It is generally supposed to be insulting to presume ignorance on the part of the other fellow, but a teacher is compelled to do so, for if the pupil were not ignorant there would be no reason for the teacher's existence and, therefore, I am going to take the trouble of explaining what is meant by the word planes.

Primarily the word plane means a flat surface. If we were to arrange a dozen boards one behind another and parallel to each other we would have one dozen

planes, or flat surfaces, but in addition we would have the abstract idea that there were a dozen different distances, and it is in this latter sense we are using

very prone to suggest that every object is at the same distance from the camera. This is particularly evident in portrait photography, so that the man who over-



E. E. Godfrey,

FIRST PRIZE.

Waukegan, Ill.

the word in our art discussion. One of the very hardest problems in picture-making is to suggest this property of distances or planes, and photography is an especial sinner in this respect, being

comes this difficulty is a king among his fellows.

Mr. Godfrey makes a splendid delineation of planes and the result is that the head of his sitter has a splendid feeling

of solidity and we feel that the ear is nearer to us than the cheek, while the latter is considerably nearer than the nose, and then above all we have a feeling that the background is a considerable distance behind the head. All this is attained, not by any clever work in developing, but by proper lighting before the exposure is made, and this is the idea I want to impress upon photographers. It is his skill in lighting, not in exposure or in development, that determines the quality of the negative; but unfortunately very few seem to realize this.

The second prize falls to a one-man photographer, for Mr. Ward informs me that the whole work of the studio is done by himself and very creditable work it is. I have again and again referred to the beautiful gradation that is characteristic of his work. He also understands lighting, and so far everything I have seen from him invariably shows the fine feeling of solidity I so much admire.

The third-prize picture is by our old friend, James H. Field, and it was with very considerable hesitation I came to the conclusion that it was inferior to the print by Mr. Ward, but I felt there was not sufficient separation between the right shoulder and the background, and I also object to the very decided black shadow from the nose, which extends to the shadow on the cheek—in fact I feel the lighting has been overdone.

BRIEF MENTION.

Muntz.—Fine lighting, but camera is too high. Left shoulder looks awkward. Spacing is not good, trim $1\frac{1}{4}$ inches from top of print.

Borry.—Pose of trunk is awkward, body looks as if it were leaning forward and therefore needs support, but the arms are close to it.

Hage.—Technically excellent, modeling very good, spacing fair. You are handicapped by the sitter, for while you have used the left arm very cleverly to conceal the stoutness, the right arm looks awkward.

Pleas.—This is by far the best from you yet, but you have too much top light

behind the figure and the result is that the lighting on the face is much too dark.

Leonard.—You have fallen down considerably; get right down to straight portraiture.

O. E. M.—You need to start at the very beginning.

Flyink.—There are big possibilities in you if you will just try real hard for six months.

Penfield.—You have made great advance in the last few months, and ought to do well very soon.

F. DUNDAS TODD.

RULES.

1. Only one print to be submitted in any one month, and this must be from a negative made in the ordinary course of business within sixty days of the date it was mailed.

2. The pictures will be judged on the first day of each month, and all prints received prior to that date will be included.

3. Requests for private criticism, accompanied by fee of \$1, may be sent along with the print and will be answered after the judging is over.

4. Mark outside of package with the words "Portrait Competition."

5. Prints are not returnable.

THE officers of the Southern Tri-state Photographers' Association announce that on account of the outbreak of yellow fever in New Orleans and the stringent quarantine regulations now enforced, they have felt it advisable to postpone the convention to be held at Birmingham, Alabama, in September, this year, until the month of March, 1906, the exact date to be given later. The officers also announce that special arrangements have been made whereby photographers from Florida and Louisiana may be admitted to membership. Louisiana photographers desiring membership will please write to Mr. Moses, of New Orleans; those in Florida are requested to write direct to the secretary, M. E. Wilson, photographer, Savannah, Georgia.

PHOTOGRAPHIC PHOTOMETRY.

(A lecture before the Photographic Society of Philadelphia.)

To preserve for us the faces of our dear ones, to furnish permanent records of scenes and events, to catch movements too quick or transitory for the eye to follow, to show objects too faint for human vision, though aided by the strongest telescopes, even to render manifest what mortals may never hope to see — these are some of the triumphs of photography. In no department is the usefulness of photography more pronounced than in astronomy. It furnishes maps of the sky that show the stars not only in their relative positions, but with images having a direct relation to their brightness. A slight interval between passing clouds permitting a few minutes' exposure will show more stars than one could plot in a month by the old methods. The precious seconds of a total eclipse of the sun are made, by use of special apparatus, to yield hundreds of images, which show the phenomenon in all its aspects and may be studied at leisure at any convenient time and place.

The photographic plate has no nerves such as cause the human eye and brain to anticipate an event or to be tardy in their perception. It is not surprised, neither is it impatient, but records according to its ability all that is presented to its action. Yet the photographic plate is far from perfect as a witness. In some cases it may be said to be biased, as for example, it has a preference for certain colors. Indeed, it looks at most things from its own standpoint. If this position were fixed, it would not be so bad; but, unfortunately, the plate is susceptible not only to light but to many other influences that surround it from the maker's hands to the finished negative. When we try to use the photographic plate in a quantitative way as a means for measuring light, these influences assail us at every point until the problem seems almost hopeless of an entire and satisfactory solution. The question in its essence is, how shall we determine the ratio between two lights

by the darkening which they produce on a photographic plate. If we expose for one second to one light and one hundred seconds to the other light, and obtain equal darkening, the ratio of the light is not one hundred to one. If we expose for the same time to each light, we must still obtain a scale of densities for comparison. Even then, if the plate has its surface slightly fogged by skylight or chemically in the developer or by the action of the metal or the wood or the box in which it has been kept, it will give a different result than one not thus affected. Even the temperature of the plate at the time of exposure may produce an error of fifty per cent. Thus, we have come to the conclusion that, to measure two lights, the exposures should be as nearly consecutive as possible, they should be of the same duration for both lights and on the same plate, and therefore developed precisely alike, the difference between the lights being equalized by using apertures of various dimensions or by setting the apparatus at different distances from the source of light or by other similar devices. Thus the final work of measuring the plate consists in determining the relation of two images of nearly the same density. As a further test the experiment should be repeated under as many different forms as possible to eliminate unknown errors, which will probably vary on different occasions. These in brief are the limitations of photography when applied to photometry.

As to the work of photographic photometry in which I have been engaged, I shall give a view of it in the slides which I have to present, very much in the same manner as if we were in Cambridge and were on a special tour of inspection of this department of the observatory work.

The photographic work of the Harvard College Observatory is done at two stations: Cambridge, Massachusetts, and Arequipa, Peru. The possession of a southern station makes it possible to extend all large pieces of stellar work from pole to pole. Simple charting is in itself an important fea-

ture. Some instruments chart the sky from two to four times in a year, others several times a month, and still others once every clear night. The photographic library at Cambridge contains about one hundred and fifty thousand plates, showing the history of the entire stellar universe from 1885 to the present time. The number of plates taken in a single night is frequently so large that it would be an onerous task to develop them according to ordinary processes. The method is to load them into brass frames holding twelve each, and place them vertically in a tank of developer where they are kept in motion by an impulse given to a pendulum arrangement to which they are attached. The capacity of the apparatus is from one hundred to two hundred plates per hour.

The first stellar photograph was taken at the Harvard College Observatory under the direction of Prof. G. P. Bond, in 1850, with the fifteen-inch refractor. The admirable paper of Professor Bond concerning later photographic work contained a study of the relation existing between the diameter of the stellar images and their brightness. Strange as it may seem, although this plan was proposed at Harvard and is in general use elsewhere, it is not employed in any of our photometric work. The method of comparing the images with a scale consisting of a series of images graded in brightness is found to be much more expeditious.

One of the simplest forms of a stellar plate may be made by leaving a small camera for about two hours pointed toward the pole. All the stars will appear as arcs of circles on the plate. The trails thus made furnish a means of comparing the brightness of the stars, but here it is seen that the farther a star is from the pole the fainter it will appear, as it is spread out over more surface. As each trail may be considered the result of a small disk of light moving over the plate, it is seen that the effective exposure is not two-hours, but the time required for each disk or circle of light to traverse its own diameter. All these factors complicate the solution of the problem.

Another way to compare the stars is to take plates that are not in focus. Each star produces an image that is a disk and may be measured by its intensity, the size being the same for all. The shape is exactly that of the lens. If we wish to put two exposures on the same plate, we can cover up half the lens for the second one. The result is that the first exposure will show circles, the second will show semi-circles, thus distinguishing between the two exposures which would otherwise be hopelessly mixed. Measures of such a plate can be made very rapidly with a properly constructed scale, but when we come to reduce our measures from one plate to another or to reduce all to a uniform system of magnitudes, the difficulties are exceedingly great, due to differences of the plates, action of the developer, temperature at the time of exposure, brightness of the sky on different nights, and other causes, all of which need careful investigation to make the work complete.

All plates exposed in the telescopes have near one edge what we call "standard squares," made by an exposure to a gas argand lamp. They furnish a ready means of reference whether the plate is of proper sensitiveness and has been properly developed. The exposure is made by a pendulum shutter which permits the light to shine on the plate for just one second when the pendulum is released by a sort of trigger. The argand is contained in a metallic box. On one side of the box slides a ribbon of brass in which are nine apertures, any one of which can be brought into position to regulate the amount of light admitted to the plate. By their use nine different intensities of light can be obtained, each differing from the one next to it by one-half magnitude. The standard distance of the plate from the aperture is one meter. If we wish, the light box can be set at different distances from the plate, varying through a range of five magnitudes. One of the experiments suggested by this arrangement is whether one-half the aperture will produce the same effect when set at one-half the distance. Tests of this char-

acter, ranging through 4.5 magnitudes, showed a small systematic divergence which is probably due to some obscure factor. The light though called "standard" is not considered thus, but is used

some being developed immediately and others reserved for future tests. The amount of darkening of the plate is found by comparison with a wedge. The wedge is made by photographing a



J. H. Field,

THIRD PRIZE.

Berlin, Wis.

as a means of reference by comparing it systematically with itself and with the stars. In 1896 I devised a scheme by which certain plates were exposed each month to the so-called standard light,

shadow of a straight edge as cast by an illuminated area of special shape. Measures of the plates up to 1902 (six years) show in general that the intensity of the light and the character of

the development have not materially changed. On the other hand, the sensitiveness of the emulsion appears to have increased by about one magnitude. As many of the plates showed considerable chemical fog, the effect of fogging was investigated with the hope of explaining discordant measures. Plates were fogged by light, and also by extending the time of development. From these it was found that a small amount of fog strengthened the intensity, while a greater amount obscured the image. The measures of the monthly tests from 1896 to 1902 were then grouped according to the density of the background or unexposed portion, and the same result was shown. The value of a large systematic series of observations is seen in that a result was obtained concerning a factor not recognized when the work was begun.

Another part of the investigation has been to measure the light of sun, moon and sky by the use of various pinhole cameras. For the moon an aperture about two centimeters square is used, either with or without a shade in front of it. For the sun the aperture used is covered with a piece of porcelain and the light of the sky screened from the porcelain by another pinhole camera. The amount of light cut off by the porcelain was carefully measured and found to be about eighteen magnitudes or sixteen million times. By such apparatus the magnitude of the sun is shown to be about twenty-six. For the sky the apertures range from very small one to large ones covering thirty degrees or more in diameter. One of the studies has been to measure the light of the polar region from noon to ten o'clock in the evening. The result of measures made May 25, 1903, shows a difference of seventeen magnitudes, i. e., the sky during the day was six million times as bright as the sky during a dark night at Cambridge. Farther from the electric lights of the city the difference may be greater. The decrease from seven to eight o'clock was very rapid, the loss being ten magnitudes for the hour, or a diminution of about one-half every four minutes.

A method for comparing the light of bright stars is to take images of them on the same plate out of focus by different amounts. By computation a series of settings for the focus are found so that the light may be varied through a range of five magnitudes, or one hundred times. A systematic series of observations is being made by which all the brighter stars will be compared with the Pole star, by exposing the same plate to the Pole star and perhaps a dozen stars to be measured for one minute each, but at foci so chosen as to bring the intensities on the plate nearly equal. In addition a first-magnitude star is photographed with a large range of focus for the sake of comparison. This work promises well, as it agrees very closely with the ideal conditions for accurate results. (1) The emulsion, the exposure and the development are the same for each group. (2) The standard of reference, the Pole star, is the same for all. (3) As the exposures are all made when the stars have reached in their diurnal course the height of the pole, no correction is necessary for atmospheric absorption. (4) If the plates are taken on moonless nights, the background of the sky is practically the same, and (5) the temperature of the plate is for all exposures that of the air and subject to no great change.

The effect of temperature is shown by an experiment as follows. A plate was cut into two parts and loaded into separate holders, one of which was placed out doors in a temperature of about zero, the other over a register where the thermometer would show about 80°. When the plates had taken the temperature of the surrounding air, both were exposed for one minute each to the image of Polaris out of focus in the telescope. In addition, the cold plate was also exposed to Polaris with the focus set to reduce the light by one-half magnitude. On development, the image on the warm plate was no brighter than the fainter image on the cold plate, thus showing that the difference in sensitiveness for a change of about 70° or 80° is 0.5 magnitudes, the cold plate being the more sensitive. Practically the same

result was obtained from a series of observations made with the pinhole camera to determine the light of the moon through an entire lunation. The plates were exposed to the "standard" argand in groups of a dozen or more. They were then exposed to the moon from night to night one at a time. After each exposure to the moon the plate used was exposed to Polaris. Thus a comparison between the moon, Polaris and the "standard" argand was ob-

will shine through an aperture in the outer wall of the laboratory building. The plate will then be exposed at the temperature of the outer air, whenever a photographic comparison is to be made.

Outside of the strictly photometric work may be mentioned the photographic observations of occultations of stars by the moon. The disappearance of a bright star on the dark limb of the moon is a most striking phenomenon. Two things are desired of the observa-



Gus. Horlin,

THIRD PRIZE.

Chicago.

tained each night. The light curve of the moon found in this manner shows the magnitude of the full moon to be about -11 , and of the half moon about -9 . From these plates it was found that temperature not only affected the sensitiveness of the plate but also changed the gradation of the intensities of darkening. In other words, it changed the entire character of the plate from a slower to a faster emulsion. With view to such difficulties, it is now proposed to repeat these observations, having the "standard" argand arranged so that it

tions: (1) to determine the precise time, (2) to note whether the disappearance is perfectly instantaneous, which would not be the case if the moon has an appreciable atmosphere. The first observation was obtained in 1898. The star is permitted to shine through a small opening, the light being received on a plate that was moved sharply every second by signals from the standard clock. A succession of images is thus obtained until the star disappears. The last image is usually fainter than the others, as the disappearance may occur

before it has received a full second. Of the thirty or more observations of this character only one showed the image next to the last one also faint. This proved to be a double star, one of its components disappearing before the other. The same apparatus has been used to photograph a bright star in broad daylight. More recently I have devised apparatus by which the light is received on a plate revolving in its own plane. The star produces a trail on the plate, that will taper to a point if the light takes even a fraction of a second to disappear. Observations of two occultations show, in one case an apparent diminution of light for about one-quarter of a second, in the other a perfectly abrupt termination. It will be necessary to obtain more observations to reach a conclusion. This apparatus also showed very nicely that an incandescent electric light faded more quickly than it came to full brightness when the current was turned off and on.

Many puzzles arise in photographic work. One mysterious system of curves found on a telescope plate is thought to be due possibly to fireworks. A simple scratch of a diamond on the glass side of a plate may produce a darkening of the film opposite. Reflections in the telescopes, "ghosts" as they are called, electric action, etc., call for detective work on the part of the photographic investigator.

If there were no more worlds to conquer, photography would in some degree lose its charm. The feeling that there is much unexplored territory just ahead, that there are undeveloped properties lying hidden within our reach gives inspiration to advance. It would be daring to prophesy as to the future of photography, but of one thing we may be sure, that man may possess in it a useful servant, capable of many unsuspected powers, sensitive not only to the light as we know it, but to many subtle influences of which our senses take no cognizance.

PROF. E. S. KING.

PHOTOTEGIE.

M. Cousté has recently described a process, to which he has given the above name, which can be used for making transparencies, reversed or duplicate negatives. The negative should be developed with any developer except pyro, till the deep shadows are distinctly seen on the back of the film, and then well washed. The following operations may be conducted in daylight. The first thing is to prepare the following solution:

Water	1 ounce	1,000 c.c.s.
Hydrochloric acid .	50 minims	100 c.c.s.
Barium peroxid ...	25 grains	50 grams

This should be mixed in a glass bottle, standing in cold water to keep it cool, and the acid added to the water first, and then the barium added in small quantities at a time with constant stirring. The negative should be immersed in the solution and the dish rocked. The film gradually begins to dissolve, and as soon as this has well begun, the solution should be poured back into the bottle, and the dish filled with clean water. The gelatin and reduced silver dissolves away, and if any sticks, it can be easily rubbed off with the finger tip, or the solution can be again applied. The result is an image consisting of varying thicknesses of gelatin and unreduced silver salt. This can be dissolved out, and after well washing the film, stained with a dye, or the silver haloid may be developed. For making duplicate negatives, it is necessary first to make a positive by contact, and treat this as described above. The dyed gelatin relief—and of course any water-soluble aniline dye can be used—forms beautiful lantern slides and transparencies for window decoration.

PHOTOGRAPHERS in the Middle West will learn with regret that Mr. William J. Hazenstab died at his home in St. Louis on August 20. Mr. Hazenstab had been identified with photographic interests practically his entire life, and had been associated with Mr. H. A. Hyatt for over twenty years.



J. W. Ward,

SECOND PRIZE.

Connellsville, Pa.

**ON THE APPLICATION OF FARMER'S
METHOD OF REDUCTION, BY WHICH
THE SHADOWS ARE PRESERVED
AND ONLY THE HIGH LIGHTS RE-
DUCED.**

The objection hitherto to the so-called Farmer's reducer has been to the tendency of the agent employed to destroy the detail of the shadow parts of the negative while acting upon the high lights; hence the Lumière Bros. introduced the persulphate of ammonia as

an agent which would act harmoniously upon the film, that is, would attack the high lights (the dense deposits of the film) in preference to the thin portions. The persulphate undoubtedly is a valuable chemical and in the majority of cases will be found to work effectively; but frequently it is refractory, apparently not acting at all in the line of reduction. Besides, it requires considerable manipulation to insure success and preservation of the negative from subse-

quent action. The writer has found that the ordinary Farmer's solution, the mixture of ferricyanid of potassium and hypo, may be made to act harmoniously upon the film, that is, to preserve the shadows while it reduces the high lights. Its harmonious action depends principally upon its constitution and mode of application.

Every one is aware how much more readily a plate will reduce and indeed how much better is the relation of high lights to shadows when the plate is reduced with the Farmer's solution immediately on removal from the fixing bath after development, than it can be after being thoroughly washed free of the hypo and dried. Indeed it is the practice of many practical workers to immediately reduce the plate after removal from the hypo bath.

Now the reason why the plate (unwashed from hypo) reduces more harmoniously as regards light and shade when placed in the Farmer's reducer is on account of the hypo on the film having the preponderance. So that if one wishes to secure shadows, the rational way to proceed is to constitute the reducer so that there may be considerable excess of hypo over the ferricyanid of potassium (the red prussiate of potash), for when the ferricyanid of potassium is in excess, the shadows invariably suffer. The method employed by the writer (who prefers the Farmer's solution to the persulphate) is to reduce immediately after fixing, when possible, making the film acid with acetic or citric acid and then to place merely in a five per cent solution of ferricyanid of potassium—lifting the plate after a few minutes action to note the progress, for the action must not be allowed to continue too long or the shadows will pay for it.

When it is necessary to reduce a plate which has been thoroughly washed from hypo, the plan is first of all to soak the film in a bath of weak acid, say a ten per cent solution for five or ten minutes, and then transfer to a bath of hypo for another five or ten minutes and, finally, subject it to the action of the

ordinary Farmer's solution, that is, one constituted with twice or three times the amount of hypo over the ferricyanid solution and made acid by addition of acetic or citric acid sufficient to redden litmus paper.

Intense plates may thus be reduced as effectually as with persulphate and with less trouble of manipulation.—*Journal of the Photographic Society of Philadelphia.* JOHN BARTLETT.

POSING FOR OBESITY.

An amusing story has been told by a man who had to appear in the Paris courts to answer a charge of vagabondage, writes a correspondent to the *Morning Advertiser*. He was a very tall man and terribly thin. "What is your profession?" asked the president of the court. "I pose as a model for obesity," replied the prisoner. The judges were surprised to hear that this lean specimen of humanity should pose as an advertisement in order to encourage those who desired to reduce their corpulency, and sought a detailed explanation. "Why, it was in this way," replied the prisoner. "I was in the service of a manufacturer of chemical products which reduced obesity. I donned a mail of rubber which could be inflated like a pneumatic tube. Then I was photographed. Afterward my portrait was exhibited in a case with the inscription, 'Before treatment.' The rubber was then deflated a little, and another photograph was taken, entitled, 'After a month's treatment.' Finally, I was divested of my rubber garment, and a photograph of my original self taken. It was labeled, 'After two months' treatment.'" The poor vagabond then explained that the dead season of his profession began. No more photographs were wanted. Those that had been taken were used for an indefinite period. He had therefore to starve. Hence the charge of vagabondage preferred against him.

If you have not got your prints ready for the third Historical Competition, make them at once. The contest closes September 30.

THE DEVELOPMENT WITH AN ACID DEVELOPER.

M. Maes, the editor of the *Journal de Photographie Pratique*, points out in a recent number that, having experimented with the method proposed by M. Balagny, of using amidol with an acid bisulphite solution, he was led on to try other developers in similar fashion with excellent results, and possibly the following abstract of his notes may be of interest.

For some considerable time it has been obvious that photographers had gradually been led on to use far too much alkali in their developers as a rule, and that, though more time was needed, yet finer results were obtainable by using an acid developer. Strongly alkaline developers not only tend to fog the plates, but also give one no time to correct errors in exposure.

The formula actually used is as follows:

Rain water filtered	1,000 cc.	1 ounce
Sodium sulphite (anhydrous)	20 g.	10 grains
Potassium carbonate (anhydrous)	8 g.	4 grains
Pyrogallal acid	8 g.	4 grains
Potassium bromid (10 per cent sol.)	48 dps.	24 drops
Glacial acetic acid	48 dps.	24 drops

The equivalent English measures are given against the metric or, rather, the same ratio, practically, per ounce of solution.

The development with this solution is slow; the image appears in about two minutes, and the total time of development is from ten to twenty minutes. Thus slowed, the development does not give those disadvantages which are always the accompaniment of strongly alkaline developers, such as excessive densities, fog and other known defects. On the contrary, the negative presents a fineness and a gradation which is comparable only to those obtained in the old collodion days. It is soft, full of detail, harmonious, yet vigorous without harshness. The most opaque parts yet remain permeable to light, and the half-tones and the delicate shades are completely preserved.

There is a grand margin of latitude and there is plenty of time to correct errors. If, for example, the image appears before one and a half minutes, one may be sure that the exposure has been too long, and two or three drops of bromid or acetic acid may be added, and this acts as a very strong restrainer. If, on the other hand, the image does not appear till after two minutes, it is a sign that the exposure was too short, and the addition of a pinch of carbonate of potash may be added.

Development with an acid possesses other properties, such, for example, as the suppression of halation to a great extent. It may be said that our formula is not actually an acid development. This is quite true. The addition of the acetic acid produces acetate of soda. This is obviously correct, but there may be other combinations formed, for a developer to which acetate of soda is added does not produce the same results.

Experiments have also been made by M. Maes of other developers, with equally satisfactory results. Thus, amidol gives equally good results with bromid and chloro-bromid papers, if the following formula be used:

Water	1,000 cc.	1 ounce
Sodium sulphite (anhydrous)	20 g.	10 grains
Amidol	8 g.	4 grains
Potassium bromid (10 per cent sol.)	64 g.	32 grains
Glacial acetic acid	64 g.	32 grains

The development is less rapid than usual, but the whites remain pure and the blacks vigorous and the tones cold.

Lantern plates give equally satisfactory results, pyro gives browns and sepias, and amidol blacks and whites. Ortol and adurol give equally satisfactory results, but pyro is the most satisfactory.

Last year Professor Valenta called attention to the use of an excessive quantity of alkali when pyro was used as the developing agent, and proved that when just sufficient alkali was used to form a mono-phenolate of the base, a quick and clean pyro developer was obtained, which was more nearly like the rapid working developers like metol, etc. The formula is:

NO. 1.

Sodium sulphite	80	grs.	160 g.
Pyrogallol	12½	grs.	25 g.
Water	½	oz.	500 cc.

Dissolve and make up the total bulk to 1 oz. or 1,000 cc.

NO. 2.

Caustic potash	5¾	grs.	11.5 g.
Or caustic soda	4	grs.	8.0 g.
Water to	1	oz.	1,000 cc.

For use, mix equal quantities of No. 1 and No. 2 and water.

Those who have not tried this particular formula should give it a trial, as it works quite cleanly, without any stain or tendency to fog or frilling, and gives great density with rapidity of action.—*British Journal of Photography*.

A SIMPLIFICATION OF THE GUM PROCESS.

While I have not the slightest faith in the future of bi-gum as a printing process, except for those who wish to veil in murky mud their incomplete technic and want of knowledge of the main principles of art, and appeal to the love of the eccentric, the following modification may be of some interest, as it certainly presents some elements of novelty and some advantages, in that the gum-worker can prepare any number of sheets beforehand and then pigment them with any desired color. The novelty lies in the application of the chromate first, then drying, and the subsequent application of the pigment.

The process is described by Herr Renger-Patzsch in a recently published work entitled "Der Eiweiss-Gummidrück."

A stock solution is first prepared as follows:

Distilled water	100	cc.
Ammonia bichromate	15	g.
Manganese sulphate	8	g.
Boric acid	3	g.

This will keep, and to every 15 cc. of it before immediate use is added:

Absolute alcohol	2.0	cc.
Formaldehyde	0.5	cc.
Fish glue (clarified)	2.0	cc.

The mixture will not keep well; it should be thoroughly mixed and applied

to the paper with a brush as evenly as possible, and then thoroughly dried, and in this state it will keep in the dark some time.

The pigment solution is prepared either with dry powder colors, or tempera, or water colors in tubes, the quantity of pigment varying, of course, according to the form of color used, and whether one or more printings are resorted to. The following solutions are also required:

1 — Egg albumen.	
2 — Gum arabic	50 g.
Water	100 cc.
3 — Metol	0.2 g.
Glacial acetic acid	3 drops
Water	100 cc.

The actual pigmenting solution is composed of:

Pigment	0.5 — 3 g.
Albumen	12 cc.
Gum solution	5 cc.
Metol solution	12 cc.

This mixture is applied with a brush to the previously chromated paper and evened out with a soft brush, and dried.

The exposure for paper thus prepared is said to be very short; for instance, under a thin negative in the sun in April it is stated to be less than a minute, but equally good results are obtained by exposing in diffused light, unless a very large amount of pigment is used, when sunlight is preferable.

Development may be effected in any of the usual ways, though it is strongly recommended to place the print face up in a dish and flood with water, the mechanical attrition of the water being usually enough, but a fine water spray may be directed on to parts of the print while still lying under the surface of the water, the thin layer of water breaking the force of the spray. Sawdust soup or brushes may also be used.—*E. J. Wall, in British Journal of Photography*.

HISTORICAL COMPETITION No. 3.

The third Historical Competition will close on the last day of this month, and we would urge every reader to take part in it. Almost every subscriber must have negatives whose subjects are suitable, and prints should be made at once.

BACKGROUNDS.

"Throw the background out of focus." Such is the legend we are instructed to keep in mind should we aspire to the producing, with the aid of lens and camera, of photographs possessing something of a pictorial character. The mere photograph, as shown of old, and to some extent at the present

the eye penetrates through more or less haze or atmosphere, which reduces (according to the distance from the eye) in clearness the various objects coming within the limits of vision. The photograph taken through a small opening can not show this, although there are those who think it correct.

But we find that when the painter



A. H. Moberg,

THIRD PRIZE.

Chicago.

time, had none of this quality, because made by the employment of the smallest available aperture. The planes near and far differing but little one from the other, and the extreme distance being as minute and clearly defined as near-by objects.

This is, of course, unnatural, for when we look abroad upon a landscape,

executes a work of art, he does his best to separate his planes, and to make the point of greatest interest stand out prominent before all others. The various planes in perspective, linear and aerial, furnish him with depth, and as these objects recede, he makes them less and still less pronounced in character until in the extreme distance he merely

suggests rather than makes quite plain. Thus we shall find in the background none of that minuteness and elaboration common to objects in the plane of chief interest, which may or may not be the foreground.

Because such objects are rendered in manner quite vague, it does not follow that they are void of form, for such is not the case and he must indeed be a shiftless workman who purposely leaves such forms in condition calculated to prove an irritant to the eye of the beholder. The background of the painter is no product of chance, being painted under some well-defined idea, and is far from being a confused mass either in form or color. Broad in treatment it may be, yet the finished product is not the result of any haphazard slinging of paint, as the uninitiated might surmise from the appearance of carelessness. It is a great art to conceal labor and effort by apparent carelessness. The painfully elaborated work of the tyro is easily differentiated by the critic, for the "prentice hand" shows in every stroke. Elaboration and detail cover a multitude of artistic sins, not the least of which are bad drawing and indecision.

It is all well enough to throw the distance out of focus, but what do we often find? When we turn to a landscape photograph with figures or other objects in the foreground, we often see meaningless blurs or splotches of black and white. All sorts of distorted figures there are of trees and patches of white due to halation. Such a background, instead of being as it should be unobtrusive, attracts the eye immediately away from that portion of the composition which should be the point or plane of chief interest. Does such a background at all resemble nature as seen by normal human sight or the artist's interpretation thereof? What makes conditions all the worse is the fact that some of the backgrounds now offered at a small price, in response to the general desire for cheapness, are about as bad, and will be found to be far from being artistic in character,

whatever such may be in execution. Many of them, however, are but sorry, coarse daubs, with glaring splotches of white to offset the shadow side of a face. These grounds are made to sell and I presume find acceptance with some amateurs, though it must be said to the credit of our best workers, their pictures betray no evidence that these grounds appeal to them.

We are presumed to emulate the work of the masters in art, old or new, but can we do so with such appliances? To my mind the etched effects, so-called, are worse. In vulgar parlance such may be called "the limit," with the poor perspective and crude execution. These affairs may be cheap. They do not belie their reputation, and make a photograph look cheap also. Dr. John Nicol has often said of a photograph, "What does not help hinders," and he is correct. The obtrusive ground does not help, so is a detriment and a hindrance.

But one need not despair, for well-painted, tasteful grounds are to be had if one is but willing to pay the price. Excellent grounds there are, but such run into money because executed by those who are to some extent persons of taste, who, knowing what they are about, command compensation somewhat approaching the due of abilities above the level of the producers of the cheap and nasty.

But to return to our landscape with figures, or figures with landscape—it matters not which—the faults are manifest in each. Throw your distance out of focus by all means; that is to say, all beyond the point of chief interest, because if you fail to do so, all planes being of like value, the eye will wander from point to point instead of being led up to and fixed upon the one prominent fact. But admitting this contention, must we tolerate these splotches—these formless specters—which make so many photographs, as regards background, hideous nightmares? Can not these spots of white be toned down into that retirement which should be the all-time intention

of every worker? Here are trees, bushes, fences, hills and what not punctuated with patches of white. In some pictures such are distorted out of all resemblance to truth as presented to normal human vision. And this, too,

Rosa Bonheur's "Horse Fair." Take a look at the distance in that picture and learn a lesson. Such effects as pointed out are a detriment to any photograph, and are not to be found in nature as disclosed to normal human vis-



W. G. Corthell,

ANCIENT LABOR.

Wollaston, Mass.

in pictures to which are awarded prizes, which seems to indicate that such blemishes are not considered offensive in the eyes of the judges.

Compare such emanations with the painted picture, which the photographer assumes to equal, and aspires to surpass. Compare with such a work as

ion, nor in art as expressed in drawing, painting, work of needle or graver. Small wonder is it that artists — painters and illustrators — sneer at photographic attempts to compare with them in competition for the applause of art lovers. Is it any wonder at their patronizing attitude when they see such

results put forth as the best that is possible under the limitations imposed by the camera? The best it decidedly is not, for there are plenty of advanced workers who are masters of this phase of the problem, and master it magnificently, too.

If one is acquainted with no other way out of the difficulty, a wad of absorbent cotton wet with *pure* (not wood) alcohol, may be depended upon to remove all objectionable spots and surfaces due to halation. Such may be retired into something like reasonable proportions by the wet wad of cotton applied with a circular motion over the offending parts. Small spots are also susceptible of removal by using the softened point of a match wet with the spirits. Sometimes, one or two of these spots in portions of deep shadow will operate to the ruin of an otherwise perfect result, and the author of the pictorial attempt seems to view it with equanimity. Eliminate these scattering lights. Make your background as rich in tone and variety as you can, but do not think to please those who know right from wrong in art, by specters that irritate refined eyes. Then as to the background for interiors and portraits; where one can not afford a first-class creation, it will be better to fall back on those made of plain textile fabrics of neutral color. The dead black will not do, for it lacks atmosphere, unless it be of the nature of velvet, or some twilled goods, both of which reflect light, more particularly when in folds or draped.

The greatest mistake that can be made, in my humble opinion, is the placing of the sitter *too near* the ground. Many a good picture is thus spoiled before it is started. The cut-out and paste-on effect, so often to be seen, is from this cause, as a rule, although the use of the small aperture is also to blame in amateur "at home" efforts. The blackest of grounds should appear something lighter than reality, because of the haze in the air between the ground and the camera. In the presence of this atmospheric effect is

the depth and charm of many pictures. Moreover, the human eye loves mystery in a picture, and where can there be any of that quality in a dead black ground of an even sameness? Variety in a background, if you will, but avoid the distracting feature so often presented in modern photographs, and to the detriment of such. JAMES THOMSON.

THE DEVELOPMENT OF P. O. P.

The development of collodio and gelatin chlorid papers has been known for many years, but there has always been wanting a process which would give any desired tone by development alone and without the necessity of subsequent toning and fixing. Now in the *Revue de Photographie*, Herr Schweitzer suggests the following method for obtaining various tones, these being also, to some extent, dependent on the exposure of the paper. If the paper is exposed till only the deep shadows are printed faintly, weak contrasts and greenish, black or bluish tones are obtained. If the shadows are printed out, brown or purplish hues are the result; whereas, if the image is fully printed out, reddish tones are obtained. The solutions are:

A.	
Saturated solution potassium bichromate.	
B.	
Pyrogallol	15 grams
Water	1,000 ccs.
C.	
Citric acid	20 grams
Water	100 ccs.
For use, mix as follows:	
Greenish tones:	
Solution A	3 drops
Water	25 ccs.
Increase of A produces greener tones.	
Blue-black tones:	
Solution A	1-2 drops
Solution C	5 drops
Water	25 ccs.
Brownish-red tones:	
Solution A	1 drop
Solution C	1 cc.
Water	25 ccs.
Plum-green tones:	
Solution A	3 drops
Solution C	8 drops
Water	25 ccs.
Cherry-red tones:	
Solution A	1 drop
Solution C	3 ccs.
Water	25 ccs.

ART IN PHOTOGRAPHY.

(Abridged Report of Lecture Delivered in the Leeds Art Gallery by A. Horsley Hinton, July 8, 1905.)

I have been asked to talk to you for a little while to-night on the subject of Art in Photography, to talk about that which some people say does not exist, for there are many who will say that

I presume every one here to-night has either already inspected the exhibition of photographs in these galleries, or will shortly do so, and you may notice that the greater part of the photographs are described in the catalogue as "pictorial." That may be taken as synonymous with artistic, but for many years



J. H. Field,

Berlin, Wis.

there can be no such thing as art in a picture which is made by a machine. With such an opinion I am entirely in agreement, and I do not hesitate to say that if a photograph is merely a mechanical transcript of nature, or so long as it is the mere automatic product of a machine, then certainly there can be nothing in it which can be called art.

those interested in this side of photography have avoided the use of the term art or artistic partly because these terms have been so misapplied, and partly through a certain diffidence lest we should seem to claim too much honor. Those who make pictures by brush or pencil, even though they paint execrably, are acknowledged as artists,

and their bad pictures are admitted as art; but not so the poor photographer, who was supposed to stand in the same relationship to his camera as the organ-grinder to his torturing instrument, the mere turner of the handle.

I have always evaded discussion on this matter. I have avoided claiming that photography is art, preferring to wait until such time that our opponents should grant that which we have felt is photography's due, and I have lived long enough to witness two very important concessions. When at the great exhibition at St. Louis it was decided that photography should form an important part of the British section, the authorities, recognizing the importance of the pictorial or artistic side, and conscious of its popularity, determined that it, and not the industrial or scientific side, should receive the most attention, and so was brought about that fine collection of photographs which occupies two of your galleries. But more significant perhaps is the fact that *The Studio*, which is the most authoritative and influential art publication in this country, has determined to devote one of its splendid special numbers, the summer number, now just ready for publication, to photography, under the title "Art in Photography," and hence, ladies and gentlemen, I asked that the title of my lecture to-night should be printed with those commas which indicate a quotation—for it is not I—who might be supposed to be a prejudiced person—but a great impartial artistic authority, who now speaks of "art in photography" as an accomplished fact. But, however gratifying this is, I am very much afraid that photographers generally are painfully ignorant of what really constitutes art in photography. I do not know if I shall succeed, but I should like when you and I separate to-night to feel that we have arrived at a better mutual understanding of what art in photography really means, and along what lines its progress is to be looked for. I have said that if the photograph is purely mechanical, if it is merely the result of the coöperation of camera, lens and

sensitive surface, the man merely turning the handle, so to speak, then it has no place in the category of art, nor is it sufficient that the man shall have carefully selected his subject with due deference to the requirements of artistic composition, and then accurately reproduced it—it will only be a chosen piece of nature, and more than that is required. And yet I imagine the great majority of photographers have no higher conception of art in photography than the reproduction of a well-selected piece of nature, whether landscape or figure.

Now, right here, I want to remark that a copy of nature is no more art than the singing of birds is comparable to a Beethoven sonata—the one is nature's music, the other is art.

There is no principle which the photographer seems to have found so difficult to grasp as this, that nature is one and art is one, but they are distinct and apart.

But, you ask, can man do better than nature? As nature, no; but from the artistic standpoint, yes.

Because all art is founded on nature, is taken from nature, it must not be supposed that its aim is to copy nature. A book of history can do no better than record faithfully historical facts, but the historical romance, the novel founded on history, does not keep accurately to the facts, and, as a piece of literature, is more artistic.

In the picture, it is not a question of improving upon nature, but of taking as much or as little of what nature gives as we may choose, and using it in order to produce something quite artificial, which shall express our personal impression of some effect in nature. With but a few strokes of a pencil or brush, the artist expresses the sweeping lines and the breadth of the moorlands, the sprightliness of the trees in spring, or the heavy foliage masses in summer. He does not attempt to copy or imitate, he *expresses* these ideas or impressions. But you may ask, is this possible in photography? Before answering, let me ask you, do you wish that it is pos-

sible, and would you accept it, welcome it, if it were done?

Frankly, I do not think the majority of photographers want art, although they may think they do. The photographer seems only to care for a photograph which vividly reminds him of nature, and if he finds in it something which does not fall in with what he remembers nature to be like, he condemns the whole.

Now, if you will keep this principle

yourself whether you are not seeking these things because you want to see nature represented. Are you seeking, are you trying to grasp the idea, the expression, which the picture is intended to convey? If not, you are expecting to find what it was never intended to provide, you are seeking apples on a plum tree.

I assumed just now your asking the question, if photography can be made to thus express ideas. The answer is



John Chislett,

Indianapolis, Ind.

in mind, I think it may help you to understand some pictorial photographs which have perhaps been strange to you before.

If you take the present exhibition as an example, I, of course, can not say that every picture hung is an example, but if you are in the somewhat elementary stage that requires to see in the photograph every blade of grass, every leaf on the tree, each detail in the distance, all clear and distinct, ask

there on the walls, but because those photographs are not, in many cases, like what you expect a photograph to be, do not run away with the idea that they are faked-up things, which ought not to be admitted to a photographic exhibition.

I will again make a personal matter of it, and will ask you, what do you do when you take a photograph out on the beautiful countryside? Is it not a fact that, seeing a pretty scene, you try to

reproduce just that scene? You consider the point of view, you print it softly and nicely; you have learned that that is the thing to do, and when it is done, it is near to being a copy of nature as any graphic means devised by man could make it. Did the scene impress you in any way but as a pretty one, or nicely arranged? If not, no one can blame you for what you have produced, you could not suggest what you did not feel, but until you have learned to feel what I may call the undercurrent of nature, you will only produce the mechanical as distinguished from the artistic photograph.

I often encounter photographers who do feel something of this sympathy for nature's moods, yet are at a loss how to use their photography to express it.

It is all but impossible to give you directions or formulæ; it is entirely a personal matter. I think composition is a first essential, and by composition I do not mean only that balance and harmony which the text-books teach us, for inseparable from composition are emphasis and focus of interest. The picture must be such a design that the spectator's interest is instantly fixed on that object or objects around which the idea to be expressed centers. A frame separates the picture from all around it, and so focuses our attention on it, the greater part of the picture serves merely as a frame or setting for the central idea, and hence we are justified in resorting to certain artifices in order that this setting or framing shall serve its purpose, and not attract attention to itself, hence we often see the suppression of detail, the shading down or simplification of all but the essential parts, not because these were shaded down or simplified in nature, but because by such artificial means, the purpose of the picture can be better carried out.

The lecturer continued by speaking of the indiscriminate manner in which nature distributed beauty and interest, whereas the artist having selected some theme or subject, ennobled it in his imagination, and relatively exaggerated it in importance, such isolation and

emphasis being essential to artistic rendering.

Some brief practical hints were given, and by means of a number of lantern slides, methods of controlling the print so as to emphasize or depress the essential or non-essential features were described.

THE LABOR BUREAU.

The Labor Bureau of the Professional Photographers' Society of New York has been organized and is now in a position to receive applications for employment from efficient workmen who can furnish satisfactory references, and to furnish their addresses to members of the society desiring help. It will cost a person wishing to register with this bureau a registration fee of \$1, and for this sum his name will be received and his references carefully investigated. If found worthy, he will be registered and every possible effort made to locate him in a position.

This Labor Bureau is intended to serve as a clearing house for reliable photographic help, and all members of the Professional Photographers' Society of New York, whether active or associate, are entitled to its help without cost other than the regular membership fee in the society.

Application blanks may be had by addressing W. I. Scandlin, manager, Labor Bureau of the Professional Photographers' Society of New York, 345 Sixth avenue, Brooklyn, New York.

DR. EDWARD BURTON McDOWELL has lately returned from an extended trip in Panama, where he did a large amount of photographic work. In a letter concerning this work, in which Dr. McDowell most interestingly relates some of his photographic experiences, he takes occasion to pay a very high tribute to the excellence of the Hammer orthochromatic plate, which he considers unequalled for work of this kind. He says in part, "Hammer orthochromatic is my ideal, and I am sending you herewith prints to illustrate its ortho qualities; in fact, I am greatly elated over my success."

ON RAY FILTERS.

Very hazy ideas seem to prevail on the subject of isochromatic screens or color filters, and I think I can not do better than flood the reader's dark mind with radiant information on so important a matter. I have no notion *why* screens are important, or what their use may be, but it must often be observed that in photographic as in other matters, it is not essential that the instructor shall know anything whatever about the subject he professes to teach. Hence we get the term professors. A man only professes to know something. If he really knew it the term would be knowers, or something of that sort.

A color screen is simply a piece of colored glass which is placed in front of the lens, or behind it, or in the pocket, or, in fact, anywhere. Its chief use is to render exposures impossible in a large number of cases. For example, on account of movement an exposure of one-fiftieth of a second is necessary, but the color screen makes the minimum exposure half a second. Therefore you can not expose at all, and so you save a plate. This is why money expended on a screen is money well spent. The screen is a symbol of true economy, for it saves its cost over and over again.

The word isochromatic is derived from the Greek *isos*, equal, and *chroma*, color; and means having the same color. This is, of course, sheer bosh, because some screens are yellow, some blue, some green, and so on. In fact, iso screens are of all colors, because they are made out of any odd bits of glass that are of no use for anything else. When an assistant in a photographic store breaks a piece of yellow or red glass intended for a darkroom lamp, he does not throw the pieces away. He cuts round chunks out with a half-crown and a six-penny glass-cutter and sells them for color screens. If there are no bumps on the glass large enough to be seen at fifty yards with the naked (or undraped) eye, the screen is described as optically worked, and the price is put up about five hundred per cent. The price is still further advanced if the piece of glass happens to fit an

old lens flange, for the screen is then described as mounted.

The finest screens are made from the pieces of thin sheet gelatin used for the adornment of the common or garden bonbon or Christmas cracker. A systematic crawl over the floor of a room where crackers have been pulled will produce material for making about forty thousand screens of all colors. The stuff is run through the mangle to take out the wrinkles and then jammed between two old negative glasses. Another method is to cut out round pieces and stick them on the surfaces of all the lenses you have. This much improves their appearance, and alters the quality of the work produced to quite a surprising extent.

One of the most decorative and successful screens in the world was produced as the result of a difference of opinion between two experts. Mr. Beck advocated a yellow screen and Mr. Harris a green one; so instead of going to law or resorting to blows, they plugged a piece of glass of each color into a mount and called it a Beck-Harris. The resulting color just matches my complexion, and since using it I have used no other.

The practical result of using a color screen is simply amazing. If there are no clouds in the sky the screen will put them in. In fact, its zeal in this direction is so great that it often puts clouds in the foreground as well, and has even been known to introduce sunset effects into portrait studies. It is very successful, too, in rectifying the false rendering of color values so unblushingly produced by people who are too mean to buy a screen. While the ordinary photograph shows green as black and blue as white, the use of a screen results in rendering green as white and blue as black; which is, of course, a great improvement.

In medical practice, too, the iso screen plays an important part. I once saw a portrait of a person whose face was covered all over with black spots and smudges described as sun freckles. Taken as a whole, the face resembled a plum pudding with strong criminal

tendencies. Next to it was another portrait of the same person after a screen had been used. There was ne'er a freckle. I have also seen well-authenticated instances of dark hair being made light by the same simple means. But I can not say whether these marvelous cures are effected by external or internal application of the screen.

Some feeble-minded folk there be who argue that a color screen is of no use except in conjunction with a proper color-sensitive plate. As usual, they are wrong. In any case a screen prolongs exposure, and so counteracts that fatal tendency toward rush and hurry that is the curse of the age. It is this insane haste that is responsible for the quick lunch, the focal plane shutter and the editor's demand for "Piffle" manuscript three weeks before the publication of the issue in which it is to appear.

Every photographer, then, should buy some assorted screens or make some with old lantern plates and Dolly dyes. They are a great blessing. Before I had any color screens I often suffered from violent attacks of industry, and from "that tired feeling." Now all is changed. Even my last sovereign.

I little thought when I mentioned light filters or color screens just now that I knew so much about them, and the whole subject seems more intelligible to me now than it ever did before. If I could only understand what it is that a screen really does I should feel that I had not lived in vain. But I'm blessed if I do know. Screens apparently serve some purpose in three-color work, as they are always used for it, but we should try to be charitable and not condemn screens altogether on account of the results produced. It may not be the fault of the screens after all. — "*The Walrus*," in *Photography*.

NEW YORK, July 19, 1905.
Photo Beacon, 805 Security Building,
Chicago, Ill.:

GENTLEMEN,—We take pleasure in informing you that we have been fortunate enough to secure Messrs. Alphonse Mucha, Alfred Stieglitz and Joseph T. Keiley as judges of the Goerz

Catalogue Cover Competition. The names of Messrs. Stieglitz and Keiley are too well known to all those interested in pictorial photography to need further introduction. Mr. Alphonse Mucha — though his name may not be so familiar to many of our photographic friends — is a painter of universal reputation. Recipient of several foreign orders, for many years director of the celebrated French Art School bearing his name, Mr. Mucha is to-day one of the recognized leaders in modern decorative art and poster designing.

We think that no better selection of judges could have been made for the Goerz competition. A more efficient and able jury, men of world-wide reputation whose standing, ability and integrity can not be questioned by any one, could not have been found.

Trusting you will insert this announcement in your valuable columns, and thanking you for the favor extended, we remain,

Yours very truly,
C. P. GOERZ OPTICAL WORKS,
A. K. BOURSALT,
Advertising Manager.

THE Century Camera Company, Rochester, New York, has purchased the Rochester Panoramic Camera Company, manufacturers of the Cirkut camera. The plant of the latter concern has been removed to the Century factory, where the Cirkut camera will hereafter be made. It is announced that a 5 by 7 Cirkut will soon be placed on the market, which will naturally help to increase the interest in and still further popularize the taking of panoramic pictures. The Cirkut camera stands alone in its field of work. It uses films of various widths and is capable of making photographs of any length, including the full circle of 360°.

To the man who is fortunate enough to own a Cirkut camera a new field in photography will be opened, and he will be able to produce results never before dreamed of.

Descriptive catalogue will be mailed upon request by addressing the Century Camera Company.

A STEREOGRAPHIC NOVELTY.

A contributor, who signs himself "H. D.," sends to the *Revue Belge de Photographie* directions for making stereoscopic negatives, with an ordinary camera, one lens and one plate. He says: "Chance revealed to me this method, which is surprisingly simple.

two smooth surfaces, which I could handle without risk of scratching, and here is where, to my great surprise, I saw that I had a relief, and a relief much accentuated.

"I examined the lens, and I held the negative against the ground glass, and I saw the relief. Naturally the sight de-



THE HUMAN TORPEDO.

Photographed with a Cooke Lens.

This picture secured the First Prize of \$100 offered by the New York *Evening World* for the best photograph at Luna Park. It was made by Matt Stratton, between 5 and 6 P.M., in a dull light, with a heavy mist off the sea.

"As a child, who amuses himself by examining a toy which Saint Nicholas has brought, I amused myself by examining the detail of my negatives through a new lens. I looked for some time without any particular result; then, in order not to soil the negative, which I held in my hand, I took the precaution of placing it against the ground glass of my darkroom, the gelatin side turned toward the glass. I thus had the

lighted me. I do not exaggerate — it means the reversal of all the stereoscopic apparatus.

"Try it by means of hooks, fasten your plate against the ground glass in your darkroom, turn your camera toward the window, focus — then look and you will see. If you are satisfied, take the trouble to reproduce your negative in diapositive — you will be astonished and delighted with the result."

A MAKE-SHIFT FOCUSING SCREEN.

If the ground-glass screen gets smashed and another piece is not at the moment accessible, it is not every one, perhaps, who knows that in the thin wax paper used by several manufacturers to pack their plates and papers we have an excellent makeshift. A piece of plain glass—a spoilt negative will do—is cleaned, a piece of the paper a little larger than the glass is stretched smoothly over it, and inserted into the rabbet of the frame and fastened in position. This I find is quite sufficient to hold the paper firmly in place, no gum being required.—T. J. T.

EDITORIAL TABLE.

“REZEPTE UND TABELLEN FÜR PHOTOGRAPHIE UND REPRODUKTIONSTECHNIK,” by Dr. J. M. Eder. It is but seldom that so thoroughly valuable a book comes to hand as this from the pen of the most eminent authority on all matters photographic. There are 192 pages of solid information, 102 of which are recipes of the highest value in the branches of development, toning, etc., while the remainder is given over to “tables” which chiefly concern the advanced student: to this latter individual the volume is a veritable mine of exact reference which must assuredly occupy a most prominent place in the library. An English translation is much to be desired. Sixth edition. Published by William Knapp, Halle, A. S., price 2 m. 50.

FROM the Photographic Times Publishing Association, 39 Union square, New York, we have received copy of “Photographic Amusements,” by Walter E. Woodbury. This is the second edition of the book, and its popularity is undoubtedly due to the fact that it treats of the byways of photography, such as are not to be found in ordinary publications. The price is \$1.

BURKE & JAMES, 118 to 132 Jackson boulevard, Chicago, are now putting up their Ray Filters in a new style of case, the idea being that this case can be used as a cap for the lens while the Ray Filter is in use. The same case is supplied with their supplementary lenses and can be used here in the same way. The idea is an excellent one and will be much appreciated.

FROM Taylor, Taylor & Hobson, St. James building, Broadway and Twenty-sixth street, New York city, we have received copy of new catalogue that has been issued by the firm. One very interesting feature of this pamphlet is a very clear statement of what constitutes an anastigmatic lens, and it will be worth while for any of our readers to secure a copy of this catalogue in order to be able to read the plain explanation of this term. They might also read with advantage another article in this pamphlet on the perennial subject, “Depth of Focus,” on which there exists almost universal misunderstanding. The main body of the pamphlet gives full particulars of all the Cooke lenses manufactured by the firm. The catalogue will be sent on request.

FROM Burke & James, 118 West Jackson boulevard, Chicago, we have received a sample of the Bee Exposure Meter, also one of the Ideal Ray Filters. Having used both instruments, we can very confidently recommend them.

W. I. SCANDLIN, 345 Sixth avenue, Brooklyn, New York, has just issued a booklet entitled “Scandlin’s Business Brieflets,” which ought to be in the hands of every professional photographer. A copy will be mailed free on request.

THE PHOTO-BEACON.

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THE PHOTO-BEACON COMPANY,
808 SECURITY BUILDING,
CHICAGO, ILLINOIS.

Eastern Office: 810 Broadway, New York.



J. Borry,

FIRST PRIZE.

Thief River Falls, Minn..

THE PHOTO-BEACON.

EDITED BY F. DUNDAS TODD.

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VOL. XVII.

OCTOBER, 1905.

No. 10.

GASLIGHT PAPER AND CONTRASTY SUBJECTS.

In the issue for March of this year, I had something to say on this subject under the heading of "A Problem in Development" and at that time took occasion to point out that the range of gradation in an average landscape ran through a scale of thirty-two distinct tones, but that I doubted if it were possible to make a negative of such a subject that would give a first-class print on one of the now popular gas-light papers such as Velox. My reason was this: bromid papers have a recognized scale of about sixteen tones and practically all the prints made from contrasty negatives that come to my office show a choking up in both the high lights and shadows. It is generally understood that in these papers the emulsion is not a pure bromid of silver, but that it also contains chlorid of silver, which is the silver salt that predominates in printing-out papers. I had a suspicion that notwithstanding the presence of this latter salt the range of tone of the paper was not equal to the demands made on it by a contrasty landscape subject.

I had intended to tackle this problem many months ago, but it was not until the middle of August, on account of our cloudy and wet weather in Chicago, that I found an opportunity to make a series of exposures on my favorite test subject at the hour when it would show

the greatest amount of contrast. When, however, the conditions were right, I filled my plateholders with a dozen plates from one box and proceeded to the experiment. The exposures were carried out as follows: Using a slow shutter speed and the lens stopped down to f 45, I knew I would get a negative that would show detail everywhere from highest light to deepest shadow on Solio paper. I therefore made two exposures with that stop. Then in turn I exposed plates in pairs with the lens at stops f 32, f 22, f 16, f 11 and f 8. I therefore had two plates on which had been given at least sufficient exposure and a series of pairs which had 2, 4, 8, 16 and 32 times that of the first pair. My reason for making two exposures with each stop was this, one was to be developed to normal density, while the other was to be kept considerably thinner, so that I might see whether or not the density of the plate had any special influence on the printing process.

The plates were developed in pairs as exposed. Before starting I made up sufficient bulk of solution for the dozen plates. As the solutions and the water used for diluting them were all at the temperature of the darkroom, and as the water used to wash out the trays was of the same temperature I could depend upon reasonable uniformity in the action of the developer.

Duration of development for what I may describe as the normally developed

plate was determined by the Watkin's method; the second of the pair received in every instance thirty seconds less time than did its fellow. The normally developed negatives according to Watkin's system, with the exception of the one to which had been given the thirty-two-time exposure, proved to be very excellent printers on Solio paper, in fact, as I anticipated, they gave prints of remarkable similarity. It may surprise many of my readers to know that even the one that received the limit of exposure, I mean the thirty-two-times one, proved to be a negative, although indications of reversal were present, while the print is really presentable and has about it very good qualities, in fact, is better than one sees produced from the negatives of the average amateur of little experience. I had anticipated that the negatives of shorter development time would make very poor prints on Solio, but there is very little to distinguish them from the other prints.

To test the printing quality I chose half a dozen brands of Velox, these consisting of regular glossy, velvet and carbon, special glossy, velvet and portrait. From each negative there was made the best possible print on each of these brands and then the results were compared.

I got a decided surprise because I found that at least two of the brands gave very fine prints of this very contrasty subject, just as good as could be got on the printing-out paper, full of detail and gradation from highest light to deepest shadow, these brands being regular glossy and special glossy, the latter being especially good, giving a fine rich quality, which did one's heart good to see. Special velvet gave results that one might describe as being very fair, while special portrait was good. Remember, I am looking at this question from the point of view of rendering detail, not of artistic quality, because if the latter were my standard I might decide differently. As with Solio I found all the negatives gave good prints, excepting those that had received thirty-two times exposure, and even they were presentable, though inclined to be flat.

Many people would expect that the underdeveloped negatives would make better prints on the brands of paper that are recommended for flat negatives, but I did not find this to be the case, nor did I expect it.

My conclusions from this experiment are as follows: that the gradation in a negative is determined by the lighting of the subject at the moment of exposure and not by the method of development; second, that with an average landscape, showing heavy shadows, it is possible to readily secure a print full of gradation and detail on both special and regular glossy paper, while those who wish to suppress detail should use special portrait or special velvet.

F. DUNDAS TODD.

PROFESSIONAL PORTRAIT COMPETITION No. 20.

Some months ago I stated that I would draw up a scheme of competitions for 1906 that would, as far as possible, cover the ground that the average photographer wrestles with day by day. At my invitation many suggestions were received as to subjects, and after the list had been made up, it was submitted to the consideration of a number of professional photographers in Chicago, and I am glad to say, met with their approval.

This list of competitions will be found at the end of the present article, but I wish to draw attention to the fact that it does not go into effect until January, so that for the remainder of this year the old plan will be continued.

I may point out that several times I have drawn attention to the fact that the average photographer rarely works with a definite purpose and, therefore, in most of the competitions I have provided for an objective, and I naturally await with great curiosity the outcome of this effort.

Not feeling altogether satisfied with my own decision in this month's competition, I submitted the prints to a jury and I am glad to say that their opinion coincided with my own. The reason for my hesitation was this: For more



C. E. Pleas,

SECOND PRIZE.

Chipley, Fla.

than a year I have followed with keen interest the efforts made by Mr. Pleas, who, in his early endeavors, did not display any special pictorial quality, but his recent progress induced me to believe that at no distant date he would

assuredly make a sudden leap into the front ranks, according to the habit that all persistent competitors have shown to be usual. When this print arrived, I was simply delighted and in making my decision, I placed it second, but was

somewhat afraid that I might be prejudiced, both on account of the photographer and the attractive subject; hence, my reason for desiring an outside opinion.

The first prize falls to Mr. J. Borry, one of our earliest contestants, and a frequent prize-winner. Mr. Borry frankly says that he does not always submit his best work every month, but prefers rather to send in a portrait with which he himself is dissatisfied in order to have another man's opinion of it, and for this reason he attains the prize list less frequently than he would otherwise do.

In a baby's portrait the great thing is naturalness and if possible indications of the freedom from care which is the birthright of every child, but of which they are too frequently deprived. This little damsel is looking very serious, but is not careworn by any means. Her face bears the look of wonder as she ponders the why and the wherefore of some new thing that has come within her vision, and the expression is therefore a perfectly natural and not unpleasing one. By this time my readers know how much I insist upon the feeling of solidity that every well-photographed head should show and I think it would be hard to find a better example than the one before us. Again, one should feel that there is space behind the figure, and to me the small light spot between the curl and the neck, just above the left shoulder, plays a very important part in securing this suggestion of atmosphere. It is just the right tint to harmonize with the dark hair, the middle-toned neck, the shadow on the dress and the light beyond. Altogether, it is a very precious little spot.

The fine tone quality running from almost white to almost dark in this print will be evident to every one at a glance, and I need therefore not enlarge upon it. My first impulse was to assume that too much space had been left on both sides of the figure and I covered considerable of it up only to find that the narrow margin would not harmonize with the characteristic look of the eyes; the photographer was right.

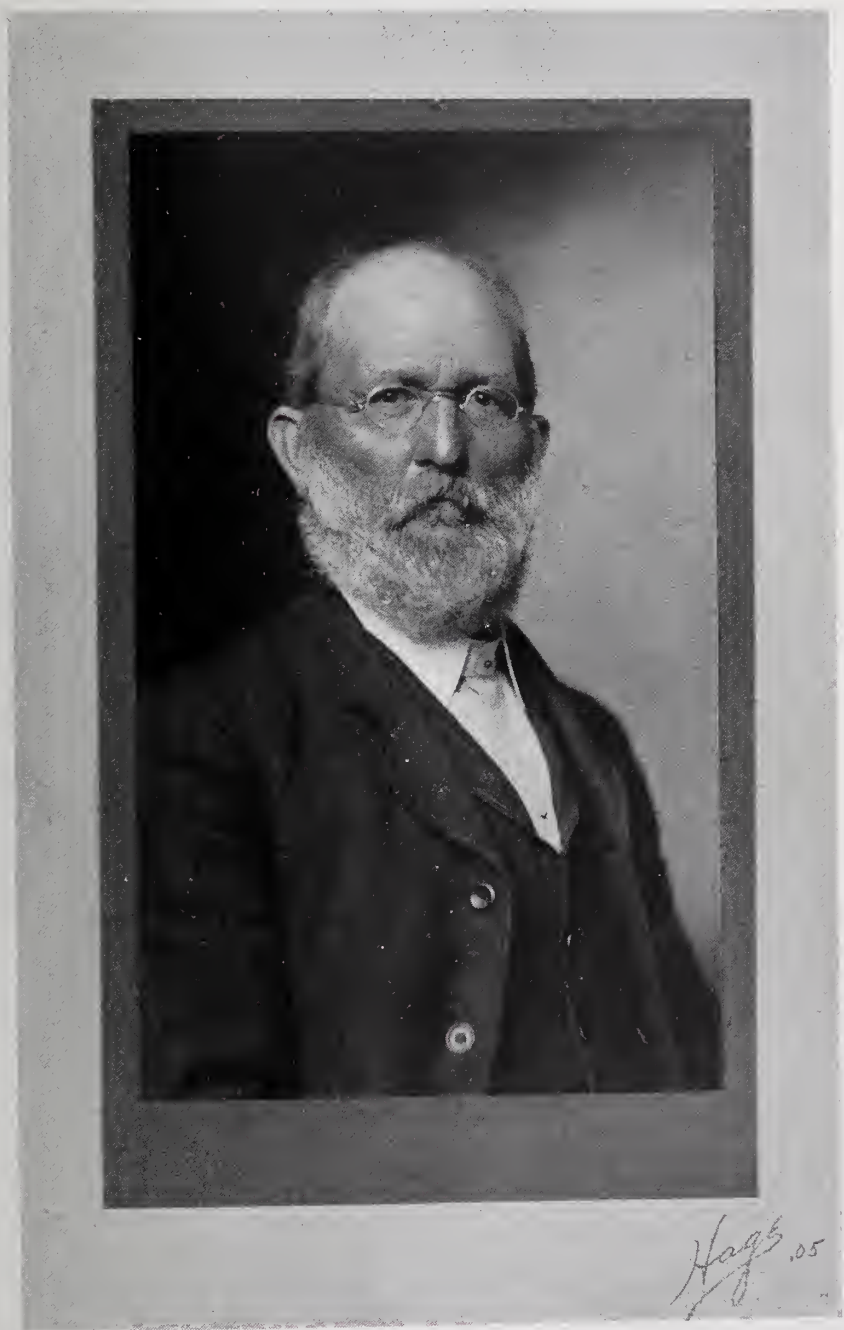
I have already referred to Mr. Pleas, the maker of the second-prize picture, who finds his field of labor in a Florida town of about 700 population. In all his past efforts, Mr. Pleas' weakness has been the lack of tone quality, in fact, black and white might be the briefest description of most of his work. But here he comes with a decided improvement and it gives me more pleasure than I can tell to find him in the ranks of the prize-winners. His work is not perfect by any means, for there is a slight tendency even yet to hardness, as is shown by the lack of detail in the beard and hair, not to speak of the deadness in the lower part of the coat, due probably to the use of a vignette in the camera, something, by the way, I do not like, but this may be prejudice on my part.

The maker of the third-prize picture, J. Edward Hage, was lucky enough to start his career three years ago under the direction of Mr. Brock, of Asheville, North Carolina, one of the most artistic men in the ranks of professional photographers to-day, although largely because of his unassuming nature he is known to only a few. A year ago, Mr. Hage started in business for himself at Goldsboro, North Carolina, and judging by his letters, seems to be as diffident as his teacher. He says he has had much greater financial success than he ever anticipated, but he finds photography a long road to travel. He has followed these contests very closely for some months and says they have benefited him wonderfully, and he intends to persevere until he lands the first prize, and I have no doubt he will do so at an early date. Any one at a glance can see that he is already a master of tone quality and a fine technician. The one objection I have to this print is the decided change from black to light in the background.

BRIEF MENTION.

Muntz — A fine subject, finely lit, too much space above the head and not enough of the body shown, hence, the figure looks squashed.

Ward — Face very finely handled,



J. E. Hage,

THIRD PRIZE.

Goldsboro, N. C.

but I think the background is far too dark.

Fritz — You have made a very good start, much better than does the average man. Please be less formal and cut loose just a little bit.

Hinderman — The above remarks apply also to you.

Godfrey — You had a fine subject and have lit it well, but your composition is very unsatisfactory because all the lines run down and thus give a feeling of great length to the figure. The hair being bunched, lengthens the face; the curl and the line of the dress and the lines on the shoulder all increase the effect.

Davis — You have given an old woman's pose and expression to a child with very unsatisfactory results.

F. DUNDAS TODD.

COMPETITIONS FOR 1906.

Competition No. 24 — Subject: Most varied and pleasing spacing. Prints must be cabinet size, square or oval. The purpose of this contest is to emphasize composition. Read "Elementary Composition," by F. Dundas Todd; price, ten cents. Competition closes January 31, 1906.

Competition No. 25 — Subject: Line. The purpose of this contest is to emphasize the importance of good flowing lines, but competitors should not forget the value of spacing. Prints may be of any size. Competition closes February 28, 1906.

Competition No. 26 — Subject: Inglis' lighting. This is the best introduction to the great problem of portrait lighting. Read "Artistic Lighting," by James Inglis; price, 50 cents. Competition closes March 31, 1906.

Competition No. 27 — Subject: Light line lighting; that is, a profile bust portrait in which a narrow band of light runs down the brow, nose, lip and chin. Competition closes April 30, 1906.

Competition No. 28 — Subject: Dark line lighting; that is, a profile bust portrait in which a narrow band of dark runs down the brow, nose, lip and chin. Competition closes May 31, 1906.

Competition No. 29 — Subject: Tone. This is the great photographic problem and consists of harmonious blending of all the masses of light and dark. Competition closes June 30, 1906.

Competition No. 30 — Subject: Given a lady sitter with dark hair, light waist and dark dress, make a three-quarter figure portrait harmonizing the contrasts. Closes July 31, 1906.

Competition No. 31 — Subject: Three-quarter Rembrandt; that is, a bust portrait in which the shadow side of the head is toward the lens. The special problem here is to so handle the far-away cheek on which the light falls that it will have the effect of receding instead of appearing to be nearer the lens than the cheek in shadow. Closes August 31, 1906.

Competition No. 32 — Subject: Planes; that is, to suggest the solidity and roundness of the sitter's head, also to suggest that the background is decidedly behind the figure and not in contact with it. Competition closes September 30, 1906.

Competition No. 33 — Subject: Character. In this competition the photographer must start out with some conception of a predominant emotional quality in the sitter and endeavor to render that idea in the portrait. The photographer must send a letter stating the idea he was trying to render. Competition closes October 31, 1906.

Competition No. 34 — Subject: Family group of three, may be adults and a child, or all children. Competition closes November 30, 1906.

Competition No. 35 — Subject: A group; no limit as to character or number, but stress should be laid upon the composition and other pictorial qualities. Competition closes December 31, 1906.

RULES.

1. Only one print to be submitted in any one month, and this must be from a negative made in the ordinary course of business within sixty days of the date it was mailed.

2. The pictures will be judged on the first day of each month, and all prints



A DARKROOM GROWTH.

received prior to that date will be included.

3. Requests for private criticism, accompanied by fee of \$1, may be sent along with the print and will be answered after the judging is over.

4. Mark outside of package with the words "Portrait Competition."

5. Prints are not returnable.

PITTSBURG, PA., August 10, 1905.

Mr. F. Dundas Todd:

DEAR SIR,—Am sending you by same mail a little curiosity in way of a species

of fungus, which, strange to say, was found growing out of an old rack in bottom of our washing tank. I discovered it accidentally on removing a mounting glass from the tank, and it impressed me as being so pretty and graceful that I took the rack under the light and made this picture of it. Many have grown since; but none quite so perfect as this specimen. The transverse section of the rack, I think, makes quite a suitable and mysterious background for the upright stem and head of the fungus. It does not speak well for an establishment to have fungus about

the place, yet, when one is acquainted with the nature of this growth, it is not so strange. They are very ethereal in their make-up. This specimen began to wilt the moment after I had taken it out of the damp sink. I made a little study of them since then and find that they have been growing every day, only I had not noticed them. Back of bottle, under a tray, or any little dark corner, I sometimes have found as many as three and four in one day. I have scrubbed the rack thoroughly, but it does not stop the growth. A little hood-shaped bud starts through the wood in the morning, grows up very rapidly, at the same time expanding the hood and by evening it is full grown (from 3 to 5 inches). This picture is a little more than life size. There are three other species of fungus that have grown on this wood, a dark reddish sponge shape, the little ear shape and the lowest form — mildew. Hoping this may interest you,

Yours truly,

H. F. WALBRIDGE.

NEW YORK, September 13, 1905.

PHOTO-BEACON, *Chicago, Illinois*:

GENTLEMEN,—We are advised that, through some unforeseen circumstances, one of the judges of the Goerz Catalogue Cover Competition, Mr. Alphonse Mucha, has been obliged to delay his arrival in this country until the end of October.

Taking advantage of this fact, and in answer to urgent requests from many interested competitors, we are pleased to prorogue, for one month, the time originally set for the close of the competition, and to extend the time for the closing irrevocably to the 31st of October, 1905.

Trusting that this will meet with the approval of all concerned, and thanking you for the space accorded in your valuable columns, we remain,

Yours very truly,

C. P. GOERZ OPTICAL WORKS,

A. K. BOURSALT,
Advertising Manager.

PICTORIAL COMPETITION No. 89.

Again it is my pleasure to be able to record a surprising equality in pictorial excellence among the prints submitted in this competition, still more gratifying to be able to say that the quality was the best yet in this subject.

All the judges agreed in awarding the first and second prizes, the third was given by a majority vote over one print by one competitor that was of marked pictorial arrangement, but was printed on paper so old that the finer gradations were lost.

The following are the awards:

First prize — W. H. Porterfield, 100 Lakeview avenue, Buffalo, New York.

Second prize — W. J. Walters, 3140 Rosewood street, Philadelphia, Pennsylvania.

Third prize — Edmond H. Royce, 22 Bank street, St. Albans, Vermont.

Special mention — Mrs. Holm, W. S. Rice, M. Neumann, E. A. Snyder, F. E. Bronson, Jas. Thomson, H. F. Robinson, Chas. Vandervelde.

CRITICISM OF WINNING PICTURES.

For originality in the underlying idea and for decorative effect, Mr. Porterfield deserves great credit. All other competitors content themselves with a spray arranged against a background, but Mr. Porterfield ventures out into the open and finds material in its birthplace. I admire exceedingly the clever way in which he suggests the presence of a support to the hanging branches, this being attained by the unobtrusive foreground and the hazy trees in the distance. These latter play a very important part because they tend to throw back the sky above them so that one feels the branches are hanging in space. Altogether, I am very satisfied with this print.

The second-prize picture is by a new competitor and is as regards size a very unpretentious effort, being only $2\frac{3}{4}$ by $4\frac{1}{2}$ inches, but its quality is all right. One recognizes readily how the main line of the spray has been so placed that it divides the space into two unequal divisions and then we can follow with interest the subdividing of these spaces



W. H. Porterfield,

Buffalo, N. Y.

FIRST PRIZE.

into smaller ones by the little twigs. I would draw particular attention to the background which is of that happy middle tint that makes a suggestion of atmospheric effect possible.

The third-prize picture is also by a new man. It is much more formal in arrangement than the others; in fact, I feel that the main stem divides the space too equally while the clumps of

blossom are too similar. There is, however, very fine quality in the tone values of the flowers, while the leaves at the end of the spray tend to give it variety.

F. DUNDAS TODD.

FUTURE COMPETITIONS.

Competition No. 90—"At Home" portraiture, that is, portraits not made in a studio. Closes September 30.

Competition No. 91 — Snap-shot pictures. Closes October 31.

Competition No. 92 — Landscapes. Closes November 30.

Competition No. 93 — Flower pictures. Closes December 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the sender's name and address, *but nothing else*. The outside of the package in addition to our address may bear that of sender. Accompanying, a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given; also the printing process.

2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

3. Prints are not returnable.

PRIZES.

First — Books to the value of \$5.

Second — Books to the value of \$2.50.

Third — Books to the value of \$1.

Any books, on any subject, or, if preferred, any article we can buy in Chicago.

One frequently hears the question asked at kinematograph displays: "However do they get some of these marvelous effects?" As a matter of fact the explanation is often very simple. For example, one blood-curdling film shows an obviously real man (representing a Christian martyr) being tied to a very genuine stake in an arena. Then enter some lions (warranted hall-marked), who proceed to tear the martyr to ribbons. Now it is obvious that few men would consent to be eaten by lions for a shilling or so a day. The secret is this: When the man has been tied up, the film is stopped and a dummy is substituted. To this dummy are tied sundry chops and steaks from the butcher's. Then the lions are turned in as the film starts again. So, after all, the lions do not make a meal of the man tied to the stake, but of the steak tied to the man.— *Photography*.

REMINISCENCES AND RAMBLING RECOLLECTIONS OF EARLY PHOTOGRAPHIC TIMES.

EMBRACING A PERIOD FROM 1839-40, ETC.

CHAPTER VII.

At this time I recall a very interesting photographic experience, a visit I had from Mr. D. O. Hill, of Edinburgh, one of the early pioneers of photography. We had a ramble together over some of the historic ground for which the neighborhood in which I lived was famous. He was a most delightful companion and his conversation teemed with artistic knowledge and inspiration. In matters photographic we were thoroughly in unison, and discussed the merits of glass as a support for carrying the sensitive medium. He being the elder, was careful not to dampen my young enthusiasm for glass, with all its delicate detail and tracery, and remarked so far as he felt and was concerned, though fully alive to the exquisite beauty and remarkable minutiae of detail in the pictures procured from the albumen and glass negatives, after all allowances, his first love for paper negatives remained as strong as ever, and their very imperfections seemed to contribute a large portion of the charm of the pictures printed from them, and I would advise you not to lose interest in the paper negatives, as in after years, perhaps, your ideas may change. I have not forgotten these and many of his other remarks, which have in time been verified, as we looked from various points at the general landscape; I was favorably impressed with his ideas of what constituted real artistic pictures, especially those to be obtained from surroundings near our own door, were our eyes so trained that we could perceive them. On turning a corner while passing along an ancient winding lane, the various properties being surrounded, as is usual in those quarters, with high stone walls, a door stood open showing the yard within, which was also surrounded by a wall. Through the open door could be seen all sorts of horse and stable requirements, namely: tubs, pails, pitchforks, hayrakes, several birch

brooms with handles leaning against the wall, etc. "Stop," he remarked; "look! there is a picture ready made to your hand without study or arrangement, which, if painted by a master hand, would be equal to many of our much-admired Dutch paintings." I had often observed this place in passing, and the scene had become so familiar to me that I had never thought of it as being a suitable subject for a picture. At another place we came across a number of tanpits, which were situated in a somewhat confined area where men were busy hauling up and draining hides, in the process of tanning to convert them into leather. "Don't you see," remarked Mr. Hill, "what a very interesting scene this would make for a picture, or series of pictures, as each part or portion could be taken separately." Passing a number of other points, we then came to one near the lake, where it narrowed into a small bay, with the gardens of the surrounding homes reaching to its shore; there the domestic ducks were in evidence in their natural element; the other surroundings being unique. Had we been photographing, many points would have made truly interesting pictures. At last we reached the grounds leading to and surrounding the ruins of the grand old palace, so long the favorite residence of the ancient kings of Scotland, and a modern resort for photographers from the wide world over. Few such buildings as this one have been so often photographed, exteriors and interiors. These we went over discussing and viewing the usual points selected by visiting photographers. They were sufficiently numerous to occupy the time at our disposal till the hour arrived for Mr. Hill's departure to Edinburgh, thus ending a most interesting and delightful ramble with a companion so congenial, and I may mention here one of Scotland's truly great amateur photographers who, with his friend Doctor Adamson, took up Talbot's process, and laid the foundation of photography in Scotland. Each was equipped with wide experience and knowledge; one an artist, the other well versed in chemistry, thus they were able

to effect improvements in the new art along the whole line. They had determined at this early date to show that true artistic work could be produced by the art of photography, and how well that aim was accomplished, we and all others who have seen their wonderful pictures can and did attest. I remember when these pictures were first exhibited in the windows of the picture-dealers and others; what great interest was excited, especially in scientific and art circles, and fired the enthusiasm of many who afterward became photographic amateurs and patrons. I have always held an equal regard for photographic patrons, as well as for photographic workers, for without the former, the latter is commercially of little value. These portraits, which were of local celebrities, were something to wonder at, and especially so the pictures and groups of the picturesque "Fisherwives," of New Haven, which in all essential art qualities, have seldom been equaled and never surpassed, not even by Adam Salomon, and for real artistic merit, not approached by Mrs. Cameron, fine as her work undoubtedly is.

Hill and Adamson devoted their attention chiefly to portraiture, and their compositions were characterized by simplicity, breadth and vigor. I may be excused remarking that the remembrance of such high-class work in those bygone years has often caused me to view with surprise and wonder, the productions of some of the recent self-styled "Naturalistic School," and sometimes the thought would arise, could their pictures be compared with those I am describing, without the judges knowing *when* or *where* they were produced; how funny it would be, if the palm was awarded to the pictures of fifty years ago.

Mr. Hill was associated not only with the circle of the members of the Royal Scottish Academy, of which he was secretary for many years, but his own family connections were celebrated artists, all R.S.A.'s. His wife's work in sculpture was of the highest merit and, then, her two brothers, the celebrated Sir Noel and Waller Paton, artists of

the highest rank, who have produced, each in his own line, works of great merit equal to the best paintings ever laid on canvas by any painter in any known nation, ancient or modern. Mr. Hill was an early admirer and advocate of carbon printing, and his own great picture of the Scottish "Disruption Worthies," was the first work of importance produced in carbon by Swan's process, before it passed into the hands of the Autotype Company.

We have had what might be styled two revolutions in photography which I remember well and the excitement which arose when Scott Archer first announced and described his collodion process, in 1851-52, and that of Doctor Maddox, in 1871-72, when he published his gelatino-bromid dry-plate process, which is still with us, but neither were latterly handled in the manner practiced by the photographic workers in the forties and part of the fifties. The present time amateurs and professionals have all their material and appliances made for them and supplied as required at moderate prices by reliable and well-equipped establishments in all large and moderate-sized cities in the country. As before mentioned in the early years, all or nearly all materials had to be manipulated or made by the individual himself, whether amateur or professional, and to many these difficulties only increased the charm of the art. PETER DOW.

(To be continued.)

A GOOD non-actinic paper medium can be made, according to Dr. Castellani, by the following method, and the result is a perfectly safe, but brilliant, orange red light, which is far pleasanter than the ordinary darkroom illumination. Paper should be soaked for five minutes in

Alcohol 95 per cent.	... 1,000 cc.
Auramine O. (Agfa) ..	5 g.
Alcoholic safranin solution (Merck 0.5 per cent)	100 cc.

and then hung up to dry.

THE USE OF EXTREMELY RAPID PLATES.

(A paper read before the British Photographic Convention on July 15.)

The attainment of any given object is invariably attended by some counterbalancing disadvantage, and this is perhaps truer of no case than that of dry plates, in which certain qualities must be sacrificed in order to endow the plates with excessive speed. Every so-called photographic season has its pet "rage," and the nature of each new rage is made evident to the manufacturer by the special requests of his clients. Thus three years ago gaslight development papers were very much in vogue, two years ago every one was deeply interested in orthochromatic photography, and nowadays every photographer requires the very fastest plate he or she can possibly get hold of.

The use of plates possessing very great speed is only advisable when the object in view justifies it. Thus the photography of children in the studio is an example; the photographing of such subjects as sports on a dull day; and in focal-plane shutter work it is obvious that a high-speed plate is practically essential. The indiscriminate use of very rapid plates is certainly inadvisable, as it is very difficult to get with them the variety of classes of negatives one can obtain with slow plates. This will be clear from the following points of difference which exist between slow and rapid makes.

THE PROPERTIES OF SLOW AND FAST PLATES.

A slow plate, i. e., one of from 50 to 75 H. and D. (ferrous oxalate),* has very little tendency to fog in development. It has a fine grain, and is therefore capable of giving considerable density in a short time, as with small granules of silver bromid the developer can readily reduce to metallic silver the entire granule. The slow plate further has a steep gradation curve — that is to say, contrasts come very readily, while details in the shadows only appear with full exposure, and, what is

* Plates equal in speed to Hammer Slow and Cramer Med. Iso.

more important yet, reversal takes place only after very considerable overexposure.

With plates in which no effort has been spared to obtain a speed of from

only obtained on prolonged development, as, the grains being large, the developer can with difficulty reduce to metallic silver the entire granule. The rapid plate has a long scale of grada-



William S. Rice,

Stockton, Cal.

150 to 300 H. and D. (ferrous oxalate)* almost all these conditions are reversed. Thus the plates have distinct—i. e., easily measurable—tendencies to fog in development. They have a comparatively coarse grain, and hence density is

* H. & D. 150 indicates a plate whose speed is equal to a Seed 27.

tion in its characteristic curve, and consequently tends to give soft results, with a wide range of tone, rather than contrasty pictures; and finally, reversal takes place fairly soon after the maximum normal exposure has been received.

The latitude of a plate being directly

proportional to its capacity, a very rapid plate should, theoretically, possess very little. In practice, however, as I hope to show later on, an extraordinary amount of latitude is possessed by many makes of very fast plates, although of course we have a wider margin with slow varieties.

GELATIN AS A FACTOR IN SPEED.

The chemistry of the very fast plate, so far as it is known, is of great interest, and is briefly as follows:

The emulsion consists of granules of silver bromid and silver iodid imbedded in gelatin, the bromid being in the greater proportion. It is questionable whether any interaction takes place between the iodid and the gelatin, but a recognized compound of silver-gelatino-bromid is formed. A certain quantity of ammonia is employed in the emulsification, and silver bromid is soluble in this, so that the gelatin surrounding the granules of silver haloids is partially saturated with an ammoniacal solution of silver bromid. Hence the gelatin itself becomes sensitized, and owing to the sensitiveness thus acquired it at once becomes a factor in the production of fog during development.

The faster the plate, the more readily is bromid absorbed by the gelatin. This may be taken as a general axiom. And until some fresh methods of manufacture are devised the rapid plate will always have greater tendencies than the slow plate to (i.) large grain, (ii.) fogging of the gelatin surrounding the granules, (iii.) steady gradation, and (iv.) lack of density in the deep shadows.

SPEED AND COLOR SENSITIVENESS.

It is well known that a slow plate is only sensitive to violet and blue rays of light; thus, very slow emulsions, such as those containing silver chlorid and bromid, are chiefly affected by the region of the spectrum lying between the H. and F. Fraunhofer lines. As, however, the emulsion becomes treated with iodid, and receives more and more digestion, or assimilation of pseudo-digestion I had perhaps better say, the sensitiveness extends further and fur-

ther through the bluish-green, green and yellow, and finally on through the orange and red even into the invisible infra-red. I would like it to be understood now that I am speaking only of what may be termed the *normal* exposures; with ridiculously long over-exposure even a slow plate can be made to appear sensitive to green and orange rays of light, but the portion of it exposed to the blue region will by this time have suffered reversal.

It will be clear from this that a very fast plate must, in order to give it its full chance, so to speak, be treated with all the reverence due to an orthochromatic plate. I have endeavored to show this sensitiveness to the whole spectrum graphically by means of photographic negatives taken on a slow plate (150 H. and D.), and a fast plate (400 H. and D.), of the spectrum of the arc light, colored spectrograph first. You will see by the slide shown on the screen two negatives of the spectrum as already stated; the upper one is on the slow plate, the lower one on the rapid plate. In the latter you will observe that the O on the scale is visible, and the O position is practically at the end of the visible red. The top spectrograph is one showing a few lines; thus the D line is situate at 4 on the scale, and it is just visible even in the rapid plate. Although compared with its sensitiveness to violet and ultra-violet light the rapid plate is very slightly affected by red, it is obvious that continued exposure to direct rays from a darkroom lamp is quite sufficient to fog the plate, and we shall therefore return to this subject again a little later on.

Meantime, I think it will be interesting to see the effect of sunlight during varying conditions of weather on a plate sensitive to the whole spectrum, as by estimating the density of successive portions of the negative curves can be plotted out showing the varying quantities of red and green light in fine weather, rain, direct sunshine, etc. These variations, although slight, have nevertheless to be sometimes considered in making an exposure with a plate influenced by them.

Having now in the view the chief characteristics, good and bad, of a rapid emulsion, we are in a position to consider the methods of treatment which will lead to the best results.

DARKROOM ILLUMINATION.

The red-sensitiveness of rapid plates being borne in mind, it is always a wise precaution to employ a red lamp in the darkroom instead of a yellow or orange illumination, and if red glass be used it should be examined carefully by means of a pocket spectroscope to see that no green light is transmitted, as is so often the case with so-called ruby glass. The man who works hard, and therefore spends a good deal of time in the darkroom, will require an illumination as brilliant as can be obtained consistent with safety, and for that purpose I can confidently recommend the following mixture for use in tank lamps—the ideal lamps for lighting the darkroom:

Tartrazine	3 parts
Titan scarlet	2 parts

This mixture is dissolved in water varying in quantity according to the thickness of the cell. The color should be such that a little pure yellow and orange passes through the solution, but the maximum luminosity is in the pure red beyond C.

Another very good dye for tank lamps, which passes more orange and yellow, and therefore gives a more pleasant illumination, as far as the eye is concerned, is mandarin orange. Care has to be taken with this dye that it is used in sufficient quantity, as too weak a solution is quite useless.

If the dark slides are not loaded in the dark, it is a safeguard to turn one's back on the red light and thus shield the plates from the direct rays. It will always be found that the greatest danger of fogging a plate by light is in the manipulations which precede development, and not those which follow it.

A BLACK BACKING FOR A RAPID PLATE.

The question of backing is of considerable importance with rapid plates, as halation is readily produced with them.

It is obvious that a plate which lacks opacity owing to the size of the granules of silver bromid will give halation more readily than an opaque plate; but even when a fast plate appears just as opaque to the eye as a medium-speed one, there is still the possibility of its being slightly more translucent. The backing applied must not be of the sienna type, as in a long exposure, especially on a colored subject, the reflected red rays, which of course should not exist theoretically, will affect the plate; an india ink backing, or any of the forms of dead-black media, is preferable, or similarly a deep red. The backing should be allowed to dry thoroughly before the plates are either put into the dark slides or wrapped up for storage, as damp is one of the most formidable antagonists to the keeping qualities (in stock) of a quick emulsion.

SPEED NUMBERS OF RAPID PLATES.

A good deal might be said with regard to exposure. Exposure depends upon speed, and speed is usually ascertained by the manufacturer, and the manufacturer is not always believed. It is supposed by a great many that a manufacturer claims a high speed for a plate because it brings him business, but this is entirely a fallacy. Putting a wrong speed number on a box of plates conveys a wrong idea of their speed to the user, who merely makes an error in the exposure and is consequently dissatisfied with the results.

What I should more particularly like to draw attention to is the method in which plate speeds should be obtained by the manufacturer, and the way in which the numbers given should be interpreted by the user. The most reliable means of determining the speed of a plate is that devised by Messrs. Hürter and Driffeld, but they chose as the standard developer ferrous oxalate—a reducer which is only used very rarely by the present-day photographer, as it is entirely unsuited to modern rapid plates. The use, therefore, of ferrous oxalate, while being almost necessary in the case of accurate research or laboratory work, is not advisable

when determining the speed for the photographer, as the speed, so-called, of a plate is almost double with pyrogallol or metol that it is with ferrous oxalate. Pyrogallol, with ammonia and with sodium carbonate and metol-hydroquinone, are the developers chiefly used by photographers for the majority of their work, and therefore the speed number referring to such developers, which is approximately 9.5ths the ferrous oxalate number, should unquestionably be given.

BROMID AND SPEED NUMBERS.

Another point is the use of bromid. Potassium bromid in the developer slightly destroys the latent image, but it does so quite impartially, hence the shadows suffer, comparatively, more than the high lights, as the same amount of sub-bromid is reconverted in each. But bromid is used in practically all developers, and it should therefore be used in the solution employed to determine the speed number of a plate. I am again referring to the "practical" speed number, and not to the number obtained only for scientific guidance.

The best guide for the practical man is to give him a speed number which can be taken as applied to the developer he is likely to use in his work; and if speed numbers were obtained by the Hürter and Driffeld methods, using a pyro-soda or metol-hydroquinone developer with an average quantity of bromid, and some simple tables or actinometer arranged to calculate the exposure from such numbers, the most accurate practical results would, I feel sure, be obtained.

GRADATION RENDERING.

The use of extremely rapid plates for purposes where a very wide range of tone is required is perfectly legitimate, and soft negatives — the blacks of which are not opaque to block the detail — are readily obtainable; not only because the gradation obtainable is steady and even, but also because the extra speed enables the half-tones to receive longer comparative exposure, as one can afford the time, even in the studio.

In the slides I will ask the lantern-

ist to put on the screen, we see H. and D. strips, the characteristic curves of three plates, slow, ideal and rapid, and if we take any ordinate P_2 P_2 P_3 , and compare on this line the amount of density obtainable for the same exposure, we find the slow gives the greater and the rapid the lesser density. This is, however, true only after a good exposure has been received, and in the next slide we see the practical comparisons. The slow plate gives the lesser density, the rapid plate the more, up to a certain point in the exposure, and after this point the rapid plate develops up soft and not too opaque, while the slow plate gives great density and consequent harshness.

THE DEVELOPMENT OF RAPID PLATES.

In considering the development of very rapid plates, it is necessary to bear in mind the tendency to fog, the coarseness of the grain, the difficulty (comparative) with which density is obtained in the high lights owing to premature reversal (the word "premature" is again used comparatively). The development of a plate is worked by means of three levers, if we may call them such. The density giver or developing reducer, the accelerator or gradation producer, and the restrainer, which at the same time insures cleanliness. The restrainer, which is of course usually bromid, is a lever which is apt to be wrongly worked, for the reason that unless added at the commencement of development it does not partially cut out the latent image, i. e., practically reduce the effect of the exposure — when added after the image has once become visible it merely slows development, thus enabling the ingredients of the latter to be modified before too much damage is done.

The best negatives on rapid plates are therefore obtained by considering what substances best fulfil the conditions imposed upon them. Such developers as metol or metol-hydroquinone are hardly advisable; amidol similarly is not worthy of consideration; eikonogen, if used carefully, will give good results; but after a considerable amount of ex-

perimenting, pyrogallol has proved the most valuable all-round reducing agent. The pyro-ammonia developer is good, because so much bromid may be employed with it; the pyro-soda developer is good because, besides its clean-working properties, it enables one to control the development so easily, and to produce any class of negative whatever at will.

RESTRAINERS FOR DEVELOPERS OF RAPID PLATES.

The photographer who aims at artistic results finds it necessary to modify a normal developer in order to produce a sufficiently soft result with plates of medium rapidity; but when using rapid plates the gradation comes of itself, and our aim is more especially to produce sufficient vigor in the high lights. Moreover, an extremely fast plate is, or should be, used on occasions when the circumstances of the exposure render it likely that every available bit of speed will be required, and therefore if we can possibly manage to work without bromid the full advantage of rapidity may be obtained.

A developer which is unequalled for use with such plates is one in which bromid is replaced by sodium citrate and sodium sulphite, which insures cleanliness without reducing the effective exposure. It is a pyro-soda developer, and the reducing solution is made by dissolving 30 grams of pyrogallol, 25 grams of citric acid and 150 grams of sodium sulphite in 1,000 ccs. of water; the accelerator is merely a twenty-five per cent solution of sodium carbonate. The great charm about this developer is the evenness of gradation which it gives, and negatives with a very wide range of tone are readily obtainable with it, in which the deepest shadows can be printed through.

SUMMER DANGERS — OVEREXPOSURE AND WARM DEVELOPER.

One of the chief difficulties, however, with plates of high speed is their exposure. The easiest mistake to make is to overexpose, and as the characteristic curve of the emulsion evidences a tendency for reversal at an early stage of overexposure, the constituents of the



E. H. Royce,

St. Albans, Vt.

THIRD PRIZE.

developer are best arranged so as to give abnormal density; the abnormal density giving power, of course neutralizes the flatness of the negative, or rather its tendency for flatness.

Development in summer is a subject which deserves special consideration. We have seen that the rapid plate has a tendency to give fog, especially if forced at all, during development. But the fog-producing factor is enormously increased with a rise of temperature, the increase being unfortunately very unreasonable in :: *n*. And the faster the plate the more unreasonable still is this proportion, so that it is essential, in order to treat the plates fairly, to keep not only solutions, but dishes, and the darkroom at as cool a temperature as possible.

FIXING PRECAUTIONS.

A fairly weak fixing solution is required in order to avoid the partial solution of the least-exposed parts of the picture, and in order to prevent development from proceeding after removal of the plate from the developer, a small amount of acidity is desirable in the fixing bath. A very satisfactory solution will be obtained by dissolving 5 ounces of sodium thiosulphate and 60 grains of acetone sulphite in a pint of water. If speed has been obtained by long digestion of the emulsion, and a tendency for frilling produced in consequence, the introduction of a small quantity of alum into the fixing bath may be necessary, more especially in hot weather.

AFTER-TREATMENT OF RAPID PLATES.

It is hardly my duty to-night to give practical suggestions for every-day work to members of the Photographic Convention, and I have therefore said little about development; but I would like to say a few words in connection with the intensification of overexposed and flat negatives. The grain of the negative being large already, we require a method of intensification which will give us the greatest possible strengthening of the image concurrent with the least increase possible of the size of the granules (rehalogenizing with subsequent partial reduction is therefore undesirable). Moreover, it is generally necessary to clear the unexposed and least-exposed portions of the negative previously to intensification in order to clear these parts from development fog. I have found that it is possible to substitute one operation for the two by simply employing an intensifier which will reduce in density the least exposed parts of the negative, while it adds to the density of the more exposed parts. Such a result can be produced by bleaching the negative in a solution of mercuric chlorid and ammonium chlorid, with subsequent treatment with a re-blackening agent which readily dissolves Ag Cl, such as ammonium or sodium thiosulphate.

T. THORNE BAKER.

THE REASON WHY.

THIEF RIVER FALLS, MINN.,

August 18, 1905.

Mr. F. Dundas Todd, Chicago, Ill.:

DEAR SIR,—When I read your "Art and the Customer" in the August PHOTO-BEACON, I got the "writing itch," as we say in the old country, and as it keeps on, I have to get rid of it. It is natural that the Italians should be more attracted by art than most other nationalities; even if they do not see the artistic part of the pictures in art galleries, it reminds them of home. But when it comes to a picture of themselves, it is different. They look at it as all the rest do—even the majority of the rich Americans. You say these last ones hustle through the rooms of the picture galleries and pass out as fast as they can. That is also natural. If they should stop and admire the pictures, people might think they did not have such things at home. But as I said, people look at pictures of themselves in a different way. Their personal vanity is then out in full force. Everybody has something in their face or figure which they like to hide or imagine that other people do not see: they look at certain details only and lose sight of the picture itself. Some will put the picture close up to their nose (if they had a magnifying glass I am sure they would use it), and then suddenly turn it around and look at the back of it and sometimes they will repeat this several times—the reason I have never been able to find out. As to their admiration of chalky white over retouched faces—that I think is the fault of the photographers, from the time they advertised "Alabaster finish." It will be many, many years before people have any reasonably correct idea about how a portrait ought to look, which, by the way, is a good thing for the pocketbooks of the photographers.

I send you to-day a picture for the competition.

Yours truly,

J. BORRY.

The Photo-Beacon Exposure Tables are guaranteed correct. Price 25 cents.

A TOO HASTY THEORY.

BY GASTON M. ALVES.

There is at present a growing opinion that both weak and strong solutions of developing agents will in the end produce like results—i. e., that

it may be added, that even these men themselves have at times failed to keep their own inductions within the limitations of their experiments and analysis. When exposures are about normal, and when the subjects are without marked



William S. Rice,

Stockton, Cal.

both will give exact effects, and in precisely the same way; the only difference being as to the time required. In many cases, this opinion is a grave error, and its prevalence seems to be due to a too hasty generalization from the interesting and valuable researches of such men as Hurter and Driffield, and

contrasts, weak and strong solutions will give practically the same effects; but with underexposures on subjects of considerable contrast, a very noticeable difference of effect will be apparent. In this latter case, the older practice of requiring a modification of the developer is founded upon better principles,

although the principles themselves may not have been well understood.

There is nothing so satisfactory and convincing in the practical arts as tests. Let any one make this one: Let him upon a brilliant outdoor scene under-expose alike two plates. Let him then develop one quickly with a strong solution, and coax out the other slowly with a weak solution. He will find that the prints from the first are harsh, while those from the second will be much softer and more satisfactory. This simple test will convince any man who has eyes to note differences. But while an ounce of fact is worth a pound of imperfect theory, it will interest some to seek a more perfect theory, which will accord with the facts in the case under consideration. That a strong solution will in a lesser time do precisely what a weak one will do in a longer time, may seem on its surface quite plausible; but to any one who has done much in physical research, the proposition will appear very questionable. Natural processes are not usually so simple, but on the contrary, almost always are governed by natural laws which can only be interpreted by some form of geometrical progression, and even these progressions are further complicated by collateral and secondary natural causes. For the purpose of finding a more perfect theory for our case in point, let us consider the following: Let two balls, say of lead, one large and the other small, be dropped from some considerable altitude. Then by the natural law of falling bodies, if their descent is in a vacuum, the speed or velocity of each at any given instant is as the square roots of the spaces fallen through, and they both would reach the ground in precisely the same interval of time. However, we here deal with only an abstract condition — nature knows no vacuum. Let us now suppose that we drop the balls through the atmosphere. We must now amend the natural law, in order to properly interpret the actual. The resistance of the atmosphere will be as the surfaces of the balls, and their surfaces will be as the squares of their

diameters. But their gravities or weights will be as the cubes of their diameters. Consequently, the resistance of the atmosphere to the smaller ball will be *proportionately* greater with it than with the larger ball, and hence the larger ball will reach the ground sooner. But the mathematician will tell us with certainty, that leaving the resistance of the atmosphere unaltered, if it were possible to so minimize the earth's gravity, the two balls would reach the ground in practically the same time. Let us now apply the analogy:

If we underexpose a plate to a scene with marked contrasts, i. e., a scene with strong high lights and decided low lights (large ball and small ball) and subject the plate to a strong developer (earth's gravitation) the high lights (large ball) will be less hindered by the inertias of the plate and chemicals, and thus acquire a more speedy development, just as the large ball will more quickly reach the earth. On the other hand, the low lights (small ball) will be so hindered by the inertias as to reach development more slowly, just as the small ball will reach the ground more slowly. Now, as the mathematician tells us, if we could so minimize the earth's gravitation that the two balls would reach the ground in practically the same time, so can we by using a diluted developer cause the high lights and low lights on our plate to reach developments in practically the same time.

The force of the foregoing may not be fully estimated by the general reader, but it will be by the mathematical one, and thus it will be seen that a more perfect theory can be set up — one that will accord with the facts of practice.

In ending, I wish to insist that crude and imperfect theories are more harmful, as well as more wearisome, than an honest ignorance. In scientific matters, Pope's warning of a little learning is especially in point.

The following letter is self-explanatory and is printed because of the interesting matter it contains.

HENDERSON, KY., September 9, 1905.

Mr. F. Dundas Todd, Chicago:

DEAR SIR,—Replying to yours of yesterday, I beg to say, that by using the term, "underexposed," I did not mean a plate so underexposed that a fairly good negative could not be gotten from it by proper development. In fact, the terms underexposure and overexposure, in my opinion, have no precise scientific value. My experiments have led me to conclude that, in a nice sense, every exposure calls for some corresponding modification both in the developing and the printing. And I think we see this in the every-day practice of photographers. Some lean to slight exposures, and some to greater exposures, and yet they both generally manage to get about equally acceptable prints. Of course, this is not to excuse haphazard methods. What I mean is, that very great liberties may be taken in exposures, if we can manage to take care of their aberrations in the subsequent processes. I know that this is counter to prevailing tendencies, but it accords with tests, and the scientific data against it commonly offered are too restricted for complete scientific inductions.

Your photo from negative thirty-two times overexposed, and with normal developer, is interesting. In my experiments I have not been able to go so far with normal developer. I have only been able to overexpose some eight or ten times, without altering the treatment in the developing.

However, by modifying the developers at the start, I have succeeded in fairly taking care of aberrations of one to eight hundred—twenty under and forty over. Professional photographers could not distinguish the prints. I found great difficulty with the twenty under—many of the negatives being fogged. But the overexposures could have been carried very much beyond the forty in a properly prepared developer.

I regard all of this matter as extremely obscure in any really broad scientific sense. We need laborious



W. J. Walters,

Philadelphia, Pa.

tests and the proper analysis. We need theories which are drawn from extended facts, and not facts to serve duty to some fellow's gray matter that is pinched by a pet theory.

Yours sincerely,

GASTON M. ALVES.

PHOTOGRAPHIC SOCIETY OF MARSEILLES.

The fourth "Salon International d'Art photographique" will be held by the Photographic Society of Marseilles from the 3d to the 25th of February, 1906.

This Salon will be international in character, and entries from America will be welcome.

Entries must be made before December 31 to Mons. Astier, Ed., 11, rue de la Grande Armée, Marseilles, France, and pictures must arrive at the same address before the 15th of January.

PURE CHEMICALS.

ROXBURY, August 27, 1905.

Mr. F. Dundas Todd:

MY DEAR SIR,—The photographic experimenter along chemical lines has his troubles from adulteration and substitution in the materials he is called upon to employ. The unscrupulous vender of "something just as good" is responsible for many a slip up, and what makes it all the more exasperating, one may never fathom the cause of failure.

Adulteration of drugs and chemicals as affecting the photographer is of small moment compared with the practice as attending the putting up of prescriptions where life or death depends on purity. In the latter case it is nothing short of criminal, and yet it is not uncommon, as many a physician can testify.

The State of Massachusetts has of late been on the trail of adulterators of every kind, not omitting the druggists, many of whom with heretofore unblemished records behind them, have been haled into court, and fined all the way from \$25 to \$75 for selling impure and imperfect drugs and chemicals. This is not the extent of the meanness of such individuals. In the matter of distilled water, which of course is essential in prescriptions, some of these people were discovered using common tap water; not only this, but they were caught selling water fresh from the faucet over the counter as pure distilled water.

To the outsider one would have imagined these people would at least have troubled themselves to *boil* the water, but no, tap water was good enough, and in this instance the trick was possible and difficult of detection, because the water supply of the city of Boston and surrounding towns is of such excellent quality, as a usual thing, being as clear as spring water.

Needless to say in many chemical photographic operations pure and unadulterated distilled water is an essential. Where one asks for it at the druggists, one is entitled to get it; it

matters not what the purpose. There is not the slightest doubt but what the failure of many an attempt to get good results in kallitype and platinotype might be traced to the fact that the water with which the solutions were made up was not in fact, as well as in name and pretension, distilled.

As an experimenter, many a failure I have had, which was quite beyond my ken. But in the light of my present knowledge made manifest by the crusade and consequent disclosures of the Massachusetts Board of Health I have no doubt but what I have many a time been unknowingly using water which was not distilled, and that in this fact lay the cause of failure.

From numberless experiments made during the past three years in the so-called iron-printing processes I have learned the importance of pure chemicals and pure distilled water; chemicals should never be bought in bulk, but in sealed bottles and packages with the name of the maker thereon. It may seem unimportant to some, but all bottles should have good corks; some of the poorer, half-rotten varieties being worse than useless. Ferric oxalate should especially be guarded from dampness; nor should silver nitrate, uranium and platinum salts be neglected, for evaporation may mark the difference between success or failure to the novice intent on following the formula with utmost exactness. To the person with more knowledge and experience, failure to make the formula work in accordance with schedule is not so important, for one may know what to do to save the day. But with the subtle chemistry of many printing formulæ it is important that the novice gets the precise quality of chemical (or water) called for, and this can not be the case where the seller is disposed to be dishonest.

JAMES THOMSON.

WHEN drying negatives in a rack, after they have been in a rack a few minutes, run the finger once or twice along the lowest corners. This removes the drop of water clinging there, and shortens the time required to dry.

A PLEA FOR GOOD TASTE AND COMMON SENSE.

BY SIDNEY ALLAN.

Delivered before the members of the P. A. of A., at Boston, Thursday, August 10, 1905.

Good taste and common sense are two qualities which, I believe, all of us regard as desirable possessions, but which are by no means as frequently met with as their popularity would indicate.

To the photographer they should be especially valuable, as I will readily prove to you. There are two sides to the profession; first, the all important business side, and, second, the so-called artistic consideration. If a photographer would show common sense in all his business undertakings, and good taste in all the work that leaves his studio, he would be nothing short of an ideal professional.

I would not be astonished in the least, if I am informed that quite a number of you reached this state of perfection, and if by chance any of them should be present, I would feel like asking for their indulgence while I deliver my lecture to the less fortunate ones.

But perfection or no perfection, I must confess I have been perturbed of late — almost as much as the profession itself — by the peculiar desire of the professional photographer to be considered an artist. Isn't this betraying a slight lack of common sense? I asked myself. And then the peculiar, steadily growing tendency in recent years to make tone the principal factor in the make-up of a photographic portrait. Isn't that showing a slight deviation from good taste? I asked myself.

Several months ago it was announced that the long contemplated marriage between photography and art had been indefinitely postponed and much through my intervention. Now, that puts me in a rather bad light, doesn't it? Meddling with the tender affections of two parties that are supposed to be devoted to each other. But alas! I am a very much abused person. Whatever statement I may make, there are always some people who wilfully misinterpret what I am saying. If I say a thing is black, they assert that I have said it is white.

I am only guilty of having drawn a line of distinction between pictorial studies and professional portraits. And it is not merely one man's opinion. A critic that amounts to anything at all never represents one man's opinions, but rather the vertical opinions of people that he has come in contact with.

I have said that pictorial photography, whose sole aim is to render the photographic point artistic — no matter whether made by an amateur or a professional — that pictorial photography, although not yet recognized as an art, may eventually be considered one. But this will not be accomplished by hanging some photograph in an art exhibition, but only by their own artistic value. At present the extreme pretendists are in my opinion entirely in the wrong, and the professionals in a way nearer the goal than they.

In regard to professional portrait photography whose aim is undeniably a practical one, filling a public necessity, I have said that it can not be art. It might be considered one, if the conditions were different. But as things are at present within our community; as it is to-day, strictly material, purse-proud, in a process of evolution — without question, no single man can do it, neither the critics, nor the artists, although they have something to say in the matter — but the public.

Now, how does the public regard photography? You all know I have found that the large majority of the intelligent public still lives in complete ignorance of the pictorial print. It even does not know of its existence. There is an occasional exhibition, but what does that signify?

At the Secession Exhibition I overheard a gentleman say to one of the exhibitors who was fluttering around him, "Ah, I see what you are driving at. You make things look antique. You are an Impressionist."

The art dealer moves shy of the pictorial prints, except when they get a chance to frame them. What one of the prominent art dealers in New York handles artistic photographs? And there are as yet no patrons who collect

photographic prints, as they do etchings, engravings, etc. It is, therefore, no exaggeration to assert that the public takes no interest in these endeavors, for the only appreciation of the public that means something is when it likes a thing well enough to buy it. In other words, when the public becomes a purchaser.

Professional portrait photography, on the other hand, is on the highway of popularity, but it is regarded strictly as a utilitarian article. And there is no denying, it is a utilitarian article.

Now, you must know how difficult it is to hammer into the head of the public an artistic utilitarian article. The silversmith, the designers of jewelry, the makers of furniture, all craftsmen — and not only in this country — work under the same difficulty as you do. And yet it goes without saying, every true craftsman has faculties far superior to that of the ordinary workman. But the public, or rather Western civilization, has rather a peculiar notion about this. They only care for comfort and utility in such things. The artist's standard is another one, and as it is invariably higher than that of the public, a continual friction arises. But the public is more powerful than the individual worker; it usually wins its battles and its demands are satisfied.

There have been times when this was different and there are countries even now where it is not the case. Every traveler returning from the Orient tells us how much more picturesquely the people live in those countries. Everywhere in India, in Siam, in China, in Japan, you will find that the environment is more artistic, and it extends to the smallest details, not only to the furniture and the things they wear, but to the ware they eat from, and the manifold utensils that are used even in a primitive household. In Japan you can see the coolies in the street discussing the merits of a colored print. I do not believe our hack-drivers indulge in such pastimes, nor do our servant girls read Spencer as they are said to do in the land of the Rising Sun.

This does not necessarily show a higher stage of culture. For if you look in these countries for great works of art you will look in vain. It perhaps even shows that they are more material than we are, caring more for bodily comfort than an art which only affects the higher faculties.

We, on the other hand, have made art entirely too exclusive. We regard it as something abstract; it must have no purpose further than to serve as an ornamentation, like a painting or statue of marble, and our artists generally feel ashamed of painting a decoration for a piano, or making the design for a piece of bric-a-brac.

We argue in this fashion: That which the multitude admires is said to be confined to the ignoble. In other words, whatever is popular must needs, *per se*, be so far commonplace that most people are fitted to appreciate it. The commonplace is, of course, the antithesis of the distinguished, hence it is argued popularity in the arts is significant of a mean attainment.

And that is perhaps the principal reason why I think professional portrait photography will never be ranked as an art. But there are other reasons. Art is largely a matter of temperament. I do not doubt for a moment that the photographer possesses a good share of it, but he can not allow it full play. As long as a second party, and very often a third or fourth or fifth party, in the persons of all-powerful relatives have something to say in the matter, he can not live up to any theories he might have. It is quite a different matter whether a writer describes a fire in one of the chapters of his novel or whether he is sent out to make a hasty report of an actual fire. He has to make sacrifices. And so has the photographer. Why, otherwise, whenever one runs across a truly artistic print in a photographic studio, would the photographer excuse himself by saying, "I wouldn't allow myself that with every one," or "That's a piece of work I made for myself"?

There's the whole of my argument in

a nutshell. Art is made to please the artist first of all, to convey his idea, if he wants it to be conveyed, as he knows it is best, without any consideration for immediate popular success. He can afford, or rather chooses, to wait. And that is just what the photographer can not do. He is absolutely in need of immediate popular success.

Business and art are a team of horses that pull together very badly. One is sure to try to gallop away from the other. But there is a great difference in which one it is. If it be art that pulls into a sleepy half-trot, people will say, "Well, he is after all a good business man." But if it be business, people will have no excuse for him; he will be obliged to close up his shop.

I must confess I do not comprehend why the photographer is so determined to be called an artist. The term "artist" is nothing to be particularly proud of in these days of artistic bead-trimming, vaudeville and loop-the-loop artists. There was a time when all Americans were colonels or judges, but now they all have to become professors or artists. And yet it is my experience that nearly all painters and sculptors of repute prefer to call themselves simply painters or sculptors. The term artist is rather labored. Why should not the photographer be satisfied to simply call himself a photographer?

Photography can stand on its own legs—or rather lower limbs, to use a Boston term. It does not need to lean for support on any other profession, art, or whatever it may be.

And would you enjoy the bill-of-fare that most artists are satisfied with? I have the pleasure of knowing four hundred or five hundred painters and sculptors, personally, and I know as a fact, or rather as an experience, that seventy-five per cent of them can not afford three square meals a day. The artist in America does not sleep on a bed of roses. He is chronically hard up. Even if he makes money his financial condition is in a deplorable state. He is an exceedingly bad manager of his own affairs.



H. F. Robinson,

Browning, Mont.

Surely you do not aspire to that doubtful distinction. It's pretty tough at times, I can tell you. Try your hand at writing poetry for a while and you'll find out.

This desire for the honorary title of artist, isn't it, after all, only a matter of vanity? They want their prints to elicit the remark, "It is not like a photograph, but much more like a picture." But it seems to me that if a photographer's prints are really good, only one question is of vital interest.

If a picture affects me with a special and unique impression of pleasure, I care little whether it is a chromolithograph or a painting, a photographic print or an etching. What is this Craig Annan or Demachy print to me? What effect does it really produce on me?

Does it give me an esthetic pleasure? And if so, what sort or degree of pleasure? Does it satisfy me as much as an etching or a lithograph? The answers to these questions are the aim of all true criticism; to know one's own impression as it really is, is the only criticism that is valuable in photography. It is at such moments absolutely futile to trouble oneself whether a photographic print is a work of art, or what the exact relation of photography is to other arts.

All this talk about art, nevertheless, makes the photographer feel a little bit ashamed of his profession. He no longer feels any particular pride in its association and would like to find some means to conceal its mechanical methods.

They see some of the extreme pictorialists, who in their eyes after all are nothing but amateurs, open studios, charge exorbitant prices, strut, clad in grand style, proclaiming that their work is the best that ever was, and all because they are artists. Naturally the professionals do not want to be left in the cold.

But what does all this amount to? It may appeal to a certain class of people with fastidious tastes, but they represent an exceedingly small fraction of the large masses of the public where tastes are of a more normal and practical bent. And of course every owner of a gallery has his own clientèle. Of course I do not mean to convey that there is nothing to admire in these extreme pictorialists. Many of their prints may be enjoyed for their decorative value, for certain beauties and certain qualities they display.

I am even of the opinion that the professionals as a body are apt to underrate the value of the amateur, largely because his work is so absolutely futile and unpractical. But we should not forget that he can afford to work more unselfishly, that he can wait on his own fads and fancies, that he can devote all his time to experiments and the solving of pictorial problems. And in this way he has done a vast amount of good. It was he who has assisted in working out the artistic possibilities of photogra-

phy, and there is no doubt that he has helped to raise its esthetic student.

But the extreme pictorialists of to-day are going entirely too far. They may represent merely a transition period, the necessary step from one phase to another, but I frankly believe they have done more harm than good. I have been associated with these men for years, and I know them as sincere workers endowed with great talent and abundant enthusiasm, but I can not help thinking and I have told them so — eight or ten years ago — that they were and now are on the wrong track.

But because they went on the wrong track, that is no reason why you should go there too. There is still time to pull the switch and wave the danger signals.

There was a time when the professionals and the pictorialists might have got along fairly well with each other. That was before the era of excessive hand manipulation, and the striving for painter-like effect.

You may recall the poem of Miss Jean Ingelow which described how a lover and his lass in merry mood, took hands across a little rill, which meandered through field and strolled along its banks until the rill widened into a streamlet, so that they had perforce to loosen hands! and even as they walked the stream grew larger, separating them further and further, until toward its mouth it became so broad that the twain were lost to each other's sight. That is what happened to the pictorialists and professionals.

They are entirely cut off from each other. They have become perfect aliens to each other, and there is no use of building a bridge or finding a boat to bring them together again. Let them stay at the other side of the river and pursue their paths. It was after all a misapplied affection. You can not get along without pictorialism, but you can get along without their extreme pictorialism.

A photographic print does not need to look as if the negative had been lying at the bottom of the dust bin or as if a cat had been asleep on the wet negative.

A portrait does not need to look like a mezzotint, a morose old master or a Japanese ghost in order to be a good photograph.

A portrait does not need to imitate with wearisome regularity in substance, form, line, mass and detail the dead bones of some approved work of art in order to be artistic. There is no sap of life in such work. It is still born.

The seeking of inspiration in the Old Masters without utilizing it in an original manner constitutes no creation. Imitation is the most primitive of all human instincts. Even the South Sea Islanders daub their hideous gods with color. No, we can not recreate the old. We can learn from it, but we can not reproduce it.

I know my friend Griffith, excellent talker that he is, has told you just the opposite, and I believe more than once. His chariot of thought is always careering in the clouds, where the Old Masters sit enthroned and he has told you to plagiarize whatever you can, carry away whole canvases from the art museum, as long as you make your work more artistic.

Bad advice, I fear. Borrowing is no such easy matter. If it were, if pictorial arrangements had simply to be gathered and stuck together, we would all do it.

But why should the photographer imitate? Does he not realize that his medium is powerful enough to be absolutely independent, to create its own new laws of composition.

Why, photography has revolutionized the entire art of printing. Where did the Impressionists, like Monet and his numerous followers, learn to sacrifice the whole for a part, if not from the haphazard pigments of nature as revealed in the finder or in the ground glass of your camera?

The photographs of galloping horses by Anschutz and Muybridge revealed to the artists a wealth of movement, that hitherto had escaped their notice, and I wonder if Raffaelli and other street painters would ever have succeeded in "fixing" the furtive movements of pedestrians and city crowds without the help of the camera. Raf-

faelli relies entirely on snap-shots for the pictorial parts of his pictures, and so did Verestchagin, the Russian war painter. The peculiar attitudes of Doges' ballet girls and of his race-track crowds are also of photographic origin. Our mural painters nearly all work from photographs. La Farge, our great American colorist, uses life-size photographic enlargements of draped models for the designs of his stained glass window.

And if the illustrators had to study every subject they treat in the old-fashioned manner of making sketches, more than one-half would be put out of business. Also the poster designers, trying to see things flat, have profited by the photographic print. And nearly all the portrait painters, even the very best, find photography indispensable. The public has obtained through photography a better idea of likeness than it ever had before, and the portrait painter finds it impossible to compete with this almost intuitive knowledge without numerous photographic studies of his sitter.

But, alas, what photographers strive for, in most instances, is merely a fragmentary accomplishment. It is not truth in the large sense, as the Old Masters understood it. To Titian and Rembrandt and Velasquez "tone" meant a combination of all pictorial qualities, the contrast of color, the balance of light and darker planes, the line arrangement; all these together produced tone. They did not sacrifice form and detail, correct drawing, the physiognomy of the faces and the idea and conception of the picture to it.

Don't misunderstand me. Tone is desirable, no picture should be without it, but it is merely one of the elements that enters into the making of a picture, and not the whole thing.

What the photographer sees in tone is merely the appearance of old age. The Old Masters have become famous, and the public has acquired a certain predilection for dark-toned pictures. The modern painters try to reproduce it, overlooking (perhaps wilfully), that the dark tonality is entirely an artificial product, as it is produced by the dust

of centuries, by dirt and dampness, the chemical action of light, and the gradual change of color, oil and varnish.

The Old Masters painted in a low key, but they probably never thought that some day their pictures would look as they look now. The modern painters try to produce a quality which has nothing to do with art; they cater to the taste of certain art patrons that have a liking for old-looking things. And the photographers have followed in their footsteps.

When Horsley Hinton was in this country he said to me: "It is nothing but the influence of Whistler, who translated all objects into flat surface planes, and in that way sacrificed more to the realization of tone than any other painter. But his more or less fragmentary visions were realized in color, which is quite a different proposition than is monochrome. And I am sure he would never have perpetrated some of those strange concoctions which pass for photographic prints, but which are really nothing but brown scraps of paper reminding one strongly of mock turtle soup. Strange forms appear on the surface. Perhaps it is veal, and it may be beef, if it is not horse or cat meat, but the principal thing is after all the brown soul."

Looking at such a picture one does not know what to make of it, and I once heard one exhibitor remark to another: "Your greens and blues are all right, but you have been too lavish with the reds in your multi-gum portraits. Look at No. —, for example; you never saw a man's face so red as that?" The other replied: "My dear fellow, how can you be so blind? That's not a portrait, it's a sunset."

What constitutes a good portrait? A likeness that produces in one characteristic attitude and facial expression as much of the sitter's individuality as is possible in a flat surface view.

The mission of photography is after all a democratic one. It answers better than other mediums of pictorial expression the special necessities of a leveling age like ours. Photography is, in my opinion, destined to become the huge,

universal record of life and nature, of buildings, people, types, events, of all activities of modern society. And this is a much greater avocation than narrowing it down to a graphic art and making it solely a medium of individual expression.

Photography is the medium of objective universal expression, and if we should ever get so far that this will be generally recognized and appreciated, then the photographers will be proud to be photographers, and fully comprehend the unlimited power and possibilities of their profession. Portrait photography, I am convinced, will be more than ever one of the most dignified expressions the pictorial instinct of mankind is possible of.

MR. J. BAUSCH, senior member of the Bausch & Lomb Optical Company, Rochester, New York, recently celebrated the occasion of his seventieth birthday by presenting to each of his twelve hundred employees a week's extra pay. Incidentally it may be of interest to state that the firm of Bausch & Lomb has in recent years made many advances along the ideal line advocated by socialistic thinkers. Thus, there is a sick fund for the employees which is supported by the firm and by assessments upon the members, this fund being controlled by a board composed of the foreman and members of the firm. There is also a pension fund for employees who have been in their service for a certain length of time and are incapacitated for further service. Great additions have been made to the plant in the past year and the firm are converting the large courtyard into a garden where the employees can, in the hot summer days, enjoy their noon hour near the splashing fountain and surrounded by beautiful flowers and shrubs.

CRIMSON TONES.

A method whereby silver prints may be toned to a crimson or carmine color is something new, and the explanations and directions given by M. Helain, in a recent issue of the journal of the

Photographic Society of India are marked by their simplicity. The bath is made by dissolving seventy-five grains of ammonium sulphocyanid with twenty grains of iodid of potassium in three ounces of water. To this is added four grains of gold chlorid, dissolved in a little water, making up as much of the

With the bath made up as recommended, toning from a half to three-quarters of an hour is said to produce pictures of a bright crimson.

THE *Oban Times* says: "It will be of interest to photographers in general,



James Thomson,

Roxbury, Mass.

bath as is necessary for instant use. The printing should only be carried to the depth required when finished, after which the prints are well washed, and immersed in the toning solution, fixed, washed and dried. It is pointed out that owing to the nature of the toning they should remain in the fixing bath for not less than a quarter of an hour.

but particularly to those who are members of the Outer Hebrides Photographic Society, to know that their late secretary, Mr. A. W. Hill, now bank agent at Shotts, has put on the market a new perfected gum pigment paper, which should be a great boon to all earnest workers with the camera. From the instructions sent out we understand

that the operations of printing and developing are few and simple, and involve no chemicals if we except baking soda, which can be commandeered in every kitchen."

EDITORIAL TABLE.

THE picture postal-card fad which has assumed such tremendous proportions in Europe, so great in fact that the Postmaster-General of Great Britain reports that during the past year the number mailed was twenty for each man, woman and child in Great Britain, has evidently overtaken this country. Our readers can easily figure out for themselves what business they will be able to do when the fashion attains similar dimensions, as it will certainly do at an early date if one can judge by the flood that is now pouring through our own postoffices. The American Aristotype Company have prepared for this boom by placing on the market ready sensitized postal cards under the name of Aristo Gold Post Cards. The emulsion used is of the self-toning variety, containing all the chemicals necessary. The manipulations are very simple, consisting, in fact, of half a dozen washes, fixing for twenty minutes and the usual washing after fixation. The samples sent by the manufacturers are very beautiful and it seems to us that every photographer should lay in stock and proceed to make ready to boom this novelty for the Christmas trade. Sample cards will be sent free on application to the manufacturers, The American Aristotype Company, Jamestown, New York. The prices charged are 30 cents per dozen and \$3 per gross.

FROM the Eastman Kodak Company we have received a copy of the latest publication issued by the firm, which is entitled "The Modern Way in Picture Making." This book covers very thoroughly every phase of photography that will interest the amateur. The space devoted to the theoretical part is brief, but sufficient; then possible subjects are dealt with at great length, including "Out-door work," "Street Scenes," "Landscape, Pictorial Photography," "Portraiture at Home by Daylight and Flashlight," also "Interiors." Then follow all the essential technical processes, and last of all, some interesting special articles,

among which may be mentioned "Nature with a Kodak," by A. Radclyffe Dugmore; "Simplicity in Composition," by Alfred Stieglitz; "Carbon Printing," by Jas. Sinclair; "The Gum-Bichromate Process," by Robert Demachy; "Winter Photography," by Rudolph Eickemeyer, Jr. The book may be had from all dealers for \$1.

FROM Burke & James, 118 Jackson boulevard, Chicago, we have received a sample of the Ingento Developing Tank, which is specially adapted for the development of Roll films in the strip, being suitable from the smallest sizes to 5 by 7. This is a very clever and simple contrivance, which ought to be very popular. It is supplied with fixtures so that it can be secured to a table, or it will be supplied attached to an iron base, which makes fixing to the table unnecessary. The price is very reasonable, being without base, 75 cents; with base, \$1.

BURKE & JAMES, 118 West Jackson boulevard, announce that they have been appointed Western agents for the Expo Watch Camera, which, as its name indicates, is of the size and has the appearance of an ordinary watch. It can be loaded and unloaded in daylight. This instrument is proving to be very popular, and its low price of \$2.50, combined with its good results, guarantee a rapid spread among amateurs.

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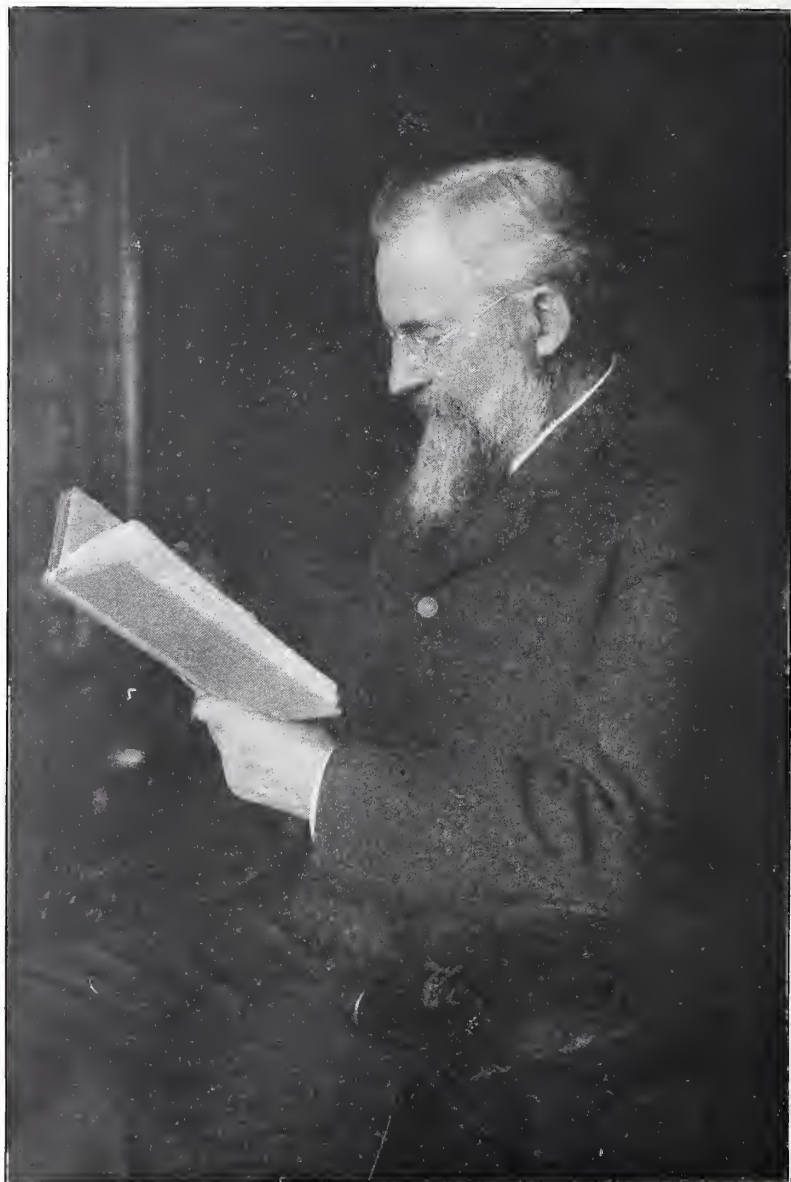
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Pocahontas Jacquemine,

FIRST PRIZE.

Kansas City, Mo.

THE PHOTO-BEACON.

EDITED BY F. DUNDAS TODD.

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CLIPPED AND PASTED.

I did not write this article. I built it. With my scissors I clipped two extracts from the daily paper I read in the morning, and with a little paste I stuck them on paper. The printer did the rest.

On the witness stand, while answering questions as to his share in the management, or mismanagement, of the New York Life Insurance Company, the renowned Mr. Perkins used these sentences:

"The old idea that competition is the life of trade is an exploded idea. Competition is no longer the life of trade; it is coöperation."

In the same day's paper William E. Curtis, writing about California, uses these words:

"While there is considerable rivalry between the thriving towns of California, they are gradually drawing together and are getting ready to do effective teamwork in the interest, not only of the State alone, but of the entire Pacific coast. They have stopped running each other down; they have become convinced that coöperation is better than competition."

Men in business for profit, if on a big-enough scale, coöperate; the small fry compete, to the immense profit of those who coöperate. I suppose photographers compete because they are mighty small capitalists.

F. DUNDAS TODD.

DEATH OF GEORGE AYERS.

One by one the old-timers in photography are dropping away and stock-house men especially will regret to hear of the death of the ever-popular George Ayers, who was in his day the oldest traveling man on the road, having represented the firm of E. & H. T. Anthony for a full generation. To know George was to like him and never once have I heard one disparaging word spoken regarding him. Though connected with photography for so long a time it will be a surprise to many to learn that during all that period he never once exposed a photographic plate, or handled a camera excepting to show it to a dealer. He died suddenly in New York on September 25, and his body was cremated in Buffalo, his old friends Messrs. Mussbaumer, Noble, Adams and Pattison being among those who attended the last rites. He was sixty-four years old.

THE SECOND AMERICAN SALON.

The reports from receiving centers indicate that a very high class of work is being submitted and the outlook is for a salon much in advance of last year.

The American Federation of Photographic Societies will start the circuit in New York city in December, under the supervision of the Metropolitan Camera Club. Full notice of time and place will appear in our next issue.

PORTRAIT LENSES.

Portrait photographers become so accustomed to the use of the regulation portrait lens that many of them seem to be indifferent to the recent improvements which have been made in these objectives. Mathematical and mechanical opticians have not been idle, and the results attained in the recent types of portrait lenses are well worthy of investigation.

Among the more notable of these lenses is the Bausch & Lomb Zeiss Portrait Unar. The Unar Lens, as originally designed by the firm of Carl Zeiss, is an objective of the very highest optical corrections and great speed, giving all those qualities which are desired in an objective where perfect definition, brilliancy of image and rapidity are expected. When this lens was placed in the hands of the Bausch & Lomb Optical Company, for manufacture for the American market, a critical examination of its formula disclosed the fact that its systems could be mounted in such a manner that without losing any of its anastigmatic qualities when the systems were in normal position, a slight separation of the systems would give almost any degree of softness and portrait quality. The result of this discovery led to the making of Unar Lenses of much larger size than those originally designed and the mounting of them in the improved mounting which has been adopted for all of the rapid lenses of the Bausch & Lomb Portrait series. This mounting permits the separation of the Iris Diaphragm and focusing attachment and the separation of the lens systems from the rear of the camera.

With the Portrait Unar it is therefore possible for the photographer to operate his diffusion attachment so as to obtain just those effects which he seeks while examining the ground glass and control the diffusion according to the size of head, complexion or texture of the skin of the sitter without loss of time and with the utmost exactness. In addition to this the same objective can be used for groups or for any other

kind of photography requiring definition and depth of focus by returning the objective systems to their normal position.

When it is remembered that the speed of this objective $f-4$ is much greater than that obtained with the average portrait lens in use in the studio, the practical money-making advantages of such an objective will be readily apparent, and we believe that our readers will be interested to have one of the illustrated catalogues which may be obtained by addressing the company at Rochester, New York.

PICTORIAL COMPETITION No. 90.

Not so very many years ago portraiture was considered to be entirely beyond the sphere of the amateur photographer, but in recent years the amateur is blazing the way for the professional in pictorial portraiture. His work is really twofold: first, in showing the possibilities, and secondly, gradually educating the public taste to the something that is different from what they used to demand. In this issue it will be interesting for the reader to compare the portrait work of the two classes, seeing that both are to be found almost side by side.

I believe in a change of judges, because if the same set of men do the judging year in and year out, they are bound to impress their ideas more or less upon the competitors. This time I submitted the prints to only one man, but he is one who, first as an amateur and afterward as a professional, has gained great reputation on both sides of the Atlantic in pictorial work. I wish many of my readers had been beside me, as he dismissed certain ambitious efforts in a few trenchant remarks. One phrase took my fancy, because it applied to so many of the photographs submitted. "There is no geography in the face," which, as my readers will guess, was intended to indicate that it really after all was not a portrait he was commenting upon, but a study. I asked him what he wanted in a portrait, and he answered: "First, geography; second, pictorial quality." So many prints were

laid aside because they had too much pictorial quality and too little geography.

His work was done very conscientiously, slowly and methodically. Print by print was appraised and the salient

First prize—Mrs. Pocahontas Jacquemine, 815 Linwood boulevard, Kansas City, Missouri.

Second prize — William S. Rice, 530 North Commerce street, Stockton, California.

Wm. S. Rice,

SECOND PRIZE.

Stockton, Cal.



fault pointed out. But he had to confess that when he came down to four at the end, the running was very even, and it was only on very minor points that the decision was made.

The following are his awards:

Third prize — Hyland G. Burton, Box 417, Youngstown, Ohio.

SPECIAL MENTION.

S. D. Lisle, W. J. Scales, F. E. Bronson.

CRITICISM.

The first-prize picture my friend described as being excellently keyed, that is to say, there is no part in the picture that is overwhelmingly white or black, to the detriment of a more important part. It is harmonious in tone everywhere, being full of detail from the highest light to the deepest dark. As a portrait, one could readily recognize the subject; as a pictorial effort, one sees the deliberate intention that is evident in the arrangement of the figure, in the spacing, in the lines, in the play of light and shade and in the harmonious arrangement everywhere. There is not one really pure white in the original and very little black, but what there is does not jar upon the eye.

The second-prize picture is a type of a great many of those submitted, but differs from them in this, that the intention is to make a portrait of the child in a pictorial setting. In many others the setting was the more important, while the pictorial factor was very very secondary.

What impresses me in this portrait above all things is the fine breadth; that is, you take any mass and the first suggestion is that it is almost one tint, but a second glance shows a beautiful gradation that is very charming. My readers should examine the background, the book and the table, then the hair, face and dress, and appreciate to the full this fine quality.

In the third-prize picture I feel that the photographer simply wanted to render the picture of a strong, healthy boy, chock full of animal vigor that was not very much under the control of its happy possessor. The sitter violates all the rules of propriety in his attitude, and the photographer has apparently a contempt for the mincing rules of composition, but he got what he aimed at, and that is success. I admire the fine, healthy animal, possibly because I own one almost a duplicate, and I admire the audacity of the photographer who started out to portray this idea and succeeded so well.

F. DUNDAS TODD.

FUTURE COMPETITIONS.

Competition No. 92 — Landscapes. Closes November 30.

Competition No. 93 — Flower pictures. Closes December 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the sender's name and address, *but nothing else*. The outside of the package in addition to our address may bear that of sender. Accompanying, a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given; also the printing process.

2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

3. Prints are not returnable.

PRIZES.

First — Books to the value of \$5.

Second — Books to the value of \$2.50.

Third — Books to the value of \$1.

Any books, on any subject, or, if preferred, any article we can buy in Chicago.

THE Prospectus just issued by *Camera Work* for the coming year includes the following: "Number XIII will be devoted to the work of the founders of the Viennese School — Messrs. Kühn, Henneberg and Watzek — and will contain twelve gravure proofs on Japan tissue, the plates of which were made in Europe under the personal supervision of Mr. Heinrich Kühn and printed in New York under our own eyes.

"Number XIV will be devoted to the recent work of Mr. Eduard J. Steichen. About twelve plates, including several examples of his interesting color-printing and color-photography, are to appear in it.

"Numbers XV and XVI will contain pictures by Joseph T. Keiley, George H. Seeley, Alvin Langdon Coburn, Frank Eugene, Sarah C. Sears, William B. Dyer, and a number of others."

The subscription price of the regular issue of *Camera Work* is \$6.00 a year for America and \$6.50 for all foreign countries. Subscriptions at that price begin with current numbers. Single copies will cost \$3 upward, and all back numbers are at a premium. Subscribers are advised to remit an extra 50 cents with the price of their subscriptions to pay for extra packing and registering.



Hyland G. Burton,

Youngstown, Ohio.

THIRD PRIZE.

THE ACCIDENTAL PHOTOGRAPHER.

DEDICATED TO MYSELF.

A friend of mine made up the thing
 He calls his mind, that he
 Would buy a camera, and a gay
 Photographer would be.
 He'd been to exhibitions,
 And to other shows besides,
 And thought it would be jolly
 And so easy to make slides.
 "You've only got to do it
 And it's done, I have no doubt,"
 But, by the merest *accident*
 He never dreamt about
 Such things as books, or lessons,
 Or *experientia docet*;
 "All you have to do," said he,

"Is take a plate, expose it,
 And if, by *accident*, of course,
 It doesn't come out right,
 You try another make of plates
 Or blame the beastly light."
 I've heard the same excuses made
 By amateurs a score —
 In fact, that sort of talk 's a part
 Of photographic lore.
 "I've really not the least idea
 Of what I'm going to do,
 But, still, I'll trust to *accident*
 And luck to pull me through."
 Behold him sallying forth one day,
 Accountred *cap-a-pie* —
 Forgive the somewhat faulty rhyme —
 He went to Peckham Rye.

He got his camera in place
 Just by the little pond —
 Not where the boys were playing,
 But a dozen yards beyond.
 He focused quite a pretty bit,
 His heart was in a flutter,
 Uncapped the lens and counted ten,
 But didn't draw the shutter.
 Of course, it was an *accident*,
 And *accidents* will happen —
 Again forgive the rhyme — he swore
 He wouldn't be caught nappin'.
 The next plate he exposed, he thought
 Was sure to make amends,
 He drew the slide, forgetting quite
 He hadn't capped the lens.
 Armed with his day's exposures
 He went home, and, truth to tell,
 When he emerged from darkness
 He'd managed very well.
 He proudly showed his negatives,
 Explaining them, said he:
 "This is a dog, and that's a man,
 And that — now let me see —
 I really think, I'm not quite sure,
 I fancy it's a tree.
 And that big patch of black beyond,
 Which plainly you descry,
 If it were white, it ought to be
 The pond on Peckham Rye!"
 I won't take you through any more,
 His printing, toning, fixing,
 The *accidental* way he went
 About solutions mixing.
 In fact, his whole career of crime —
 In kindness be it said —
 Was one long string of *accidents*
 From A right through to Z.
 At length he joined the "S. L. P.,"
 And, after many tries,
 He, by the merest *accident*,
 Forgot to win a prize.

MARK A. KINGHORNE.
 —*The Photographic News.*

NEW YORK, August 25, 1905.

On September 1 we will remove our factory and office to Rochester, New York, where we will have greatly increased facilities for the manufacture of our products, thus insuring the prompt filling of all orders.

All business communications should be addressed to us at Rochester, New York.

For the convenience of the trade we will retain our salesroom at 175 Elm street (corner of Broome street), New York city, where a full line of all our products will be stocked.

Yours respectfully,
 THE FOLMER & SCHWING MFG. CO.

PROFESSIONAL PORTRAIT COMPETITION No. 21.

This time I did not judge the portraits, but handed the work over to the friend who disposed of the amateur contest. The following are his awards:

First prize — E. E. Doty, Belden, Michigan.

Second prize — J. W. Ward, Connelville, Pennsylvania.

Third prize — J. Borry, Thief River Falls, Minnesota.

CRITICISM.

The first-prize picture is a beautiful example of the fine play of light and shade. I need but draw attention to the beautiful roundness of the hat on the child's head, to have this point appreciated. The definition is sharp enough to please the most enthusiastic believer of the sharp-focus school, and this only goes to show that for fine tone quality it is not necessary that the subject should be out of focus.

The second-prize picture is an excellent example of the lighting advocated so strenuously by James Inglis, and is worth studying by every photographer.

The third-prize picture has in it many good qualities, the most charming to me being its fine tone quality, but I think Mr. Borry made a mistake in the elliptical shape of the print. All the lines of the subject are downward, excepting those of the forehead, and these principal lines are practically repeated by the outline of the figure.

BRIEF MENTION.

H. E.—It is generally considered better to have more space in front of the face than behind the head.

Muntz.—Lighting very good, background possibly a trifle too dark.

White.—Very good, indeed.

Pleas.—Portrait of lady, much too spotty.

COMPETITIONS FOR 1906.

Competition No. 24 — Subject: Most varied and pleasing spacing. Prints must be cabinet size, square or oval. The purpose of this contest is to emphasize composition. Read "Elementary

Composition," by F. Dundas Todd; price, 10 cents. Competition closes January 31, 1906.

Competition No. 25 — Subject: Line. The purpose of this contest is to emphasize the importance of good flowing lines, but competitors should not forget the value of spacing. Prints may be of

Competition No. 27 — Subject: Light line lighting; that is, a profile bust portrait in which a narrow band of light runs down the brow, nose, lip and chin. Competition closes April 30, 1906.

Competition No. 28 — Subject: Dark line lighting; that is, a profile bust portrait in which a narrow band of dark



E. E. Doty,

Belden, Mich.

FIRST PRIZE.

any size. Competition closes February 28, 1906.

Competition No. 26 — Subject: Inglis' lighting. This is the best introduction to the great problem of portrait lighting. Read "Artistic Lighting," by James Inglis; price, 50 cents. Competition closes March 31, 1906.

runs down the brow, nose, lip and chin. Competition closes May 31, 1906.

Competition No. 29 — Subject: Tone. This is the great photographic problem and consists of harmonious blending of all the masses of light and dark. Competition closes June 30, 1906.

Competition No. 30 — Subject: Given

a lady sitter with dark hair, light waist and dark dress, make a three-quarter figure portrait harmonizing the contrasts. Closes July 31, 1906.

Competition No. 31—Subject: Three-quarter Rembrandt; that is, a bust portrait in which the shadow side of the head is toward the lens. The special problem here is to so handle the far-away cheek on which the light falls that it will have the effect of receding instead of appearing to be nearer the lens than the cheek in shadow. Closes August 31, 1906.

Competition No. 32—Subject: Planes; that is, to suggest the solidity and roundness of the sitter's head, also to suggest that the background is decidedly behind the figure and not in contact with it. Competition closes September 30, 1906.

Competition No. 33—Subject: Character. In this competition the photographer must start out with some conception of a predominant emotional quality in the sitter and endeavor to render that idea in the portrait. The photographer must send a letter stating the idea he was trying to render. Competition closes October 31, 1906.

Competition No. 34—Subject: Family group of three, may be adults and a child, or all children. Competition closes November 30, 1906.

Competition No. 35—Subject: A group; no limit as to character or number, but stress should be laid upon the composition and other pictorial qualities. Competition closes December 31, 1906.

RULES.

1. Only one print to be submitted in any one month, and this must be from a negative made in the ordinary course of business within sixty days of the date it was mailed.

2. The pictures will be judged on the first day of each month, and all prints received prior to that date will be included.

3. Mark outside of package with the words "Portrait Competition," and with sender's name and address.

4. Prints are not returnable.

TO REMOVE YELLOW STAIN.

To remove the yellow stain after fixing is very often a troublesome undertaking. There are many methods given, but best of all I consider is that originally suggested by a French expert, M. Garbe. According to the author it is based on the action of nascent sulphur dioxid generated by the influence of air and moisture on hypo.

The mixture is made by taking equal parts of glycerin and water and dissolving in it as much ordinary hypo as possible. The strength does not really matter very much, but the stronger the better. As a rough guide, however, to a beginner I might put it in table form:

Water	1 ounce
Glycerin	1 ounce
Hypo	$\frac{1}{2}$ to $\frac{3}{4}$ ounce

When dissolved, or nearly so, take a soft brush and spread the solution on the yellow stained negative, set aside on a level surface, out of the way of dust and heat. According to the depth of the yellow stain, the tint infallibly disappears in a more or less long period, which may vary from one to twenty-four hours. Judging from the above treatment, one might think that immersion in a bath of glycerin, water and hypo would be sufficient, but such is not the case, as the air would not gain access to the film. The air helps the stain to disappear, and so the brush treatment and exposure of the film to the air is necessary.

With a solution of water and hypo alone, the water would quickly evaporate and leave hypo crystals on the film. The object of the glycerin is to prevent drying and crystallization even after a very long period, and also to increase the proportion of hypo dissolved. When the stain has disappeared it is necessary to well wash the negative and to dry in the usual way.

By this simple process I have removed yellow stains of over three years' standing. I find it cheaper and better than any of the well-known clearing baths, chrome, alum or an old gold toning bath, which is sometimes recommended.

A. HARVEY.

**REMINISCENCES AND RAMBLING
RECOLLECTIONS OF EARLY
PHOTOGRAPHIC TIMES.**

EMBRACING A PERIOD FROM 1839, ETC.

CHAPTER VIII.

Several years before and some time after the advent of the collodion process, there were many well-known workers in photography producing fine work. I may mention a few of these, namely, George Shaw, Bayham Jones, W. P. Fry, B. B. Turner, S. Bucle, Sir William Newton, F. W. Berger, Albria Rosling, etc., who were all practicing the talbotype as amateurs, as well as Roger Fenton, E. Becqueral, E. M. Regnault, Gustave C. Gray and Mr. Stewart, preferring waxed paper, as did also Mr. Stokes, Doctor Percy, Robert Hunt, I. D. Llewellyn, Francis Bedford, Peter C. Neve, Foster, C. H. Waring and Sir T. M. Wilson, but none of their work was shown at the first exhibition. All their names appeared, however, in the catalogue of the Photographic Society's first exhibition, held at the Suffolk street gallery in 1854. These are a good example of the men who took to photography for the love of it as amateurs, and their names were familiar to other amateurs in different parts in the country. It should not be forgotten, however, the interest felt by photographers when Mr. T. H. Hannah showed six specimens of tones of printing, also Mr. T. H. Goodeve exhibited prints on albumenized paper. M.M. Ferrier and Martens each sent some marvelous specimens of photography on albumenized glass, almost rivaling the delicacy of collodion, to the exhibition held at the Society of Arts.

Mr. Roger Fenton's remarkable and able paper on the "Present Position and Future Prospects of the Art of Photography," was of inestimable value and interest to most workers, and I well remember the admiration it called forth, and it was considered of such importance by the authorities that they allotted the liberal space of six pages to it in their quarto catalogue of 1852. No doubt many strange experiences come to most photographers in their

time, although never related, and I had my share of them in those early days. One amusing incident occurred when on a photographic mission with a Mr. Hardy—a lawyer friend of mine—I had been asked to photograph a piece of property where the boundary line was a disputed point. If photographs of the ground could be had, they might be used, and prove useful as evidence. I agreed to do this and got my camera and all necessary requirements ready. We set out one day, driving along by the seashore enjoying the fine sea breezes and admiring the big waves rolling in toward the bay. On reaching the disputed ground we unhitched the horses, sending them to the village, retaining the carriage to be used as a darkroom when changing and developing, etc. I wanted to be sure before leaving, and was careful in making exposures as to focus, etc., in getting the whole disputed ground on the pictures, and have them clear and distinct, that would show up well. After the work was completed and considered satisfactory, chemicals, etc., repacked and put in order for the return journey, Mr. Hardy and I took a stroll further along toward an ancient ruin on the shore. The day being warm, the saline air made us thirsty. Some distance ahead we observed something appearing and disappearing behind a projecting rock. When we got nearer we discovered the ground was hollow and saw the figure of a man bending toward a pool of clear spring water. We recognized him as a mutual friend of ours, a well-known bailie in the old burg. We hailed and asked him what he was doing there. "Why," he replied, "I am trying to make a little grog." "The Lord be thanked," said Mr. Hardy. "We will get something good now," holding out his hand for the cup. The bailie filled it from the spring, remarking, "This is fine water." "But where is your flask?" asked Mr. Hardy. "Oh," replied the bailie, "I have been getting the water now, but had the whisky last night." Our disappointment may be more easily imagined than described,

but we laughed heartily at his pawky joke, and invited him to accompany us to dinner at the village inn. We had a special treat in a fine fish dinner, fish freshly caught from the briny deep, intermingled with other good cheer, and many a racy story. Mr. Hardy was a great wit and story-teller, equal to Sir Daniel McNee, P.R.S.A., whom I knew well (and he was considered the prince in that line). We drove home in the cool of the evening, and I had my photographs ready in time for use and sent them to Mr. Hardy, who considered them to be thoroughly satisfactory. They were accepted as evidence, and proved the correct line of the disputed boundary so well that a satisfactory decision was arrived at and settled. I was told that my photographs were the first that had been used and accepted as evidence in a court of law.

In the early-day processes, photogenic manipulation — collotype or talbotype — required apparatus and materials somewhat different from, though many similar to, what is at present in use, but as it was quite a new thing, long descriptions were necessary to guide beginners in the art. So I will confine myself briefly to the particular processes proved to be suitable and which I have occasionally worked myself.

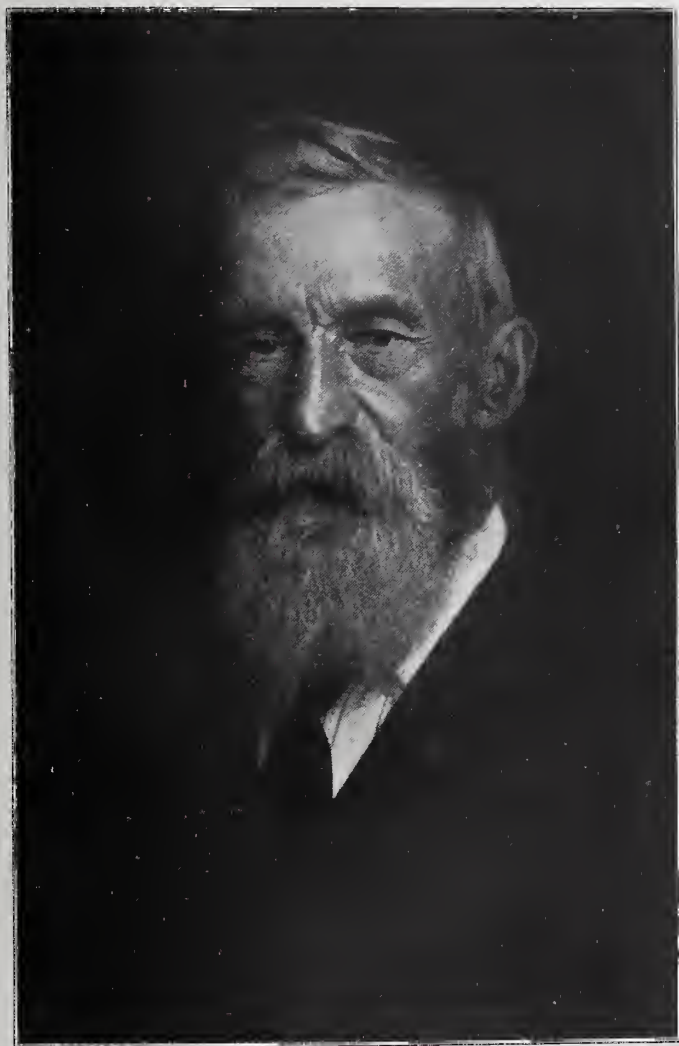
Chemicals and materials in use were: Nitrate of silver, acetic acid, chlorid of sodium (common salt), gallic acid, hyposulphite of soda, iodid of potassium, bromid of potassium, etc.; three or four flat porcelain dishes for holding the solutions of iodid of potassium, nitrate of silver, distilled water, hyposulphite of soda, etc.; a sheet of plate glass, supported so as to be level, to apply the gallo-nitrate; camel or badger hair brushes; a basin for holding hot water to assist developing; a graduated glass measure to measure out the gallo-nitrate. This measure should not be a too-narrow one to admit of being readily cleaned, cleaning absolutely essential after every time of using, inattention to which will cause failure. A board for laying the paper upon while applying the solutions. The paper

should be selected with care, uniform in texture and thickness — may be ascertained by holding it between the eye and a strong light. It will be found on examining most papers in this way, preferably gaslight or candlelight, that the sheet is full of irregularities in thickness, and very often minute holes may be detected. These defects exist mostly in very highly glazed thin papers. A moderately thick paper is not at all objectionable, provided it has been made without sulphate of lime. The paper should be well sized, for it is found that the organic matter in the size renders the paper when prepared much more sensitive. Old paper is preferable to new paper for photographic purposes. A paper having much blue in its composition should be avoided. Coloring matter contains several substances which considerably injure a good photograph. It generally gives a disagreeable, dirty appearance to the light parts. It should be chosen as old as possible so that it stands the action of the chemicals and washing better than new paper — the latter is more easily penetrated, often in different parts, causing irregularity. Looking over some old photographic notes about washing negatives and prints fading, etc., reminds me of many talks among photographers in the early days, and it may be useful to remind those who forget, as well as the younger members in the photographic art, by a few words on correct fixing of prints and negatives which may be sometimes overlooked, this source being more likely the cause of fading than the usual one of insufficient washing, etc.

From the very first days of photography it was insisted on to fix in sufficiently strong solution of hyposulphite of soda, some even using it boiling hot — the latter softens the paper too much and is unnecessary — but it is well to keep this in remembrance all the time, also the necessity for sufficient washing. As these precautions will be sure to give more perfect results in fixation, it has often surprised me that attention

should be so seldom called to a matter of such importance, and hyposulphite of soda, I frequently observe, gets a great deal of blame for the mischief that its brother hyposulphite of silver is guilty of. Hyposulphite of silver, it is

in excess to dissolve out this salt, which is the immediate result of the combination between the hyposulphite of soda and the silver haloid. The importance of this point can not be exaggerated and is certainly worth while as conducive to



J. W. Ward,

Connellsville, Pa.

SECOND PRIZE.

well known, is insoluble in water, but is soluble in a solution of hyposulphite of soda, therefore the most careful washing will be useless unless the plate or print has been sufficiently long in the soda solution and the soda sufficiently

permanency in treating either plates or prints that are valuable. After removal from the ordinary fixing bath, I would advise what has often been practiced, a second bath of freshly mixed hyposulphite, and think this simple yet most

important matter should be more frequently impressed on the mind of photographic workers. As in all probability, the attention paid to the careful fixing as well as the often-used second fresh hyposulphite bath and subsequent well-washed prints, in these early days, largely accounts for the many fine photographs sometimes seen, notwithstanding the test of over fifty years, as fresh and bright as in the days of their youth.

Photography has a wide range of subjects suitable for several processes — old and new — which may prove interesting to minds of original cast who take delight in moving out of the beaten track and taking up the study of old and valuable discoveries which were made after much patient research by able and original minds, resulting in beautiful photographic pictures, although doubtless the usual rage for novelty would pass over them, as it were, leaving them in the forgotten past.

PETER DOW.

(To be continued.)

HISTORICAL COMPETITION No. 3.

A little over one dozen readers took part in this competition. This is a great surprise to me, as, judging by the deluge of letters I used to receive, hundreds were simply awaiting an opportunity of showing what real photography looked like. They objected to fuzziness, composition, light and shade, and all the other points that go to make a pictorial effort. In this competition nothing is considered but technic. Focusing is expected to be sharp, exposure at least enough, development and printing to be the best possible to bring out detail. Yet the sticklers for all these things, and the kickers about their absence, so far have not been heard from. Why?

The following are the awards:

First prize — C. M. Whitney, 153 W. Third street, Bayonne, New Jersey.

Second prize — Wm. S. Rice, Stockton, California.

Third prize — S. S. Lloyd, 827 Prospect avenue, Buffalo, New York.

The first-prize picture explains itself, showing the kitchen and probably chief

living room of the early pioneer days. One's eye wanders with interest over the various articles hanging on the walls, noting how many of them were at that time absolutely indispensable, and yet are utterly unnecessary.

The second-prize picture shows the door and stairway of the old Spanish Mission, San Luis Rey (St. Louis, the King), California. It was built in June, 1798, and was made famous in after years by the author of Ramona.

The third-prize picture illustrates some old willow trees planted by the Acadians at Grand Pre, Nova Scotia, over two hundred and fifty years ago.

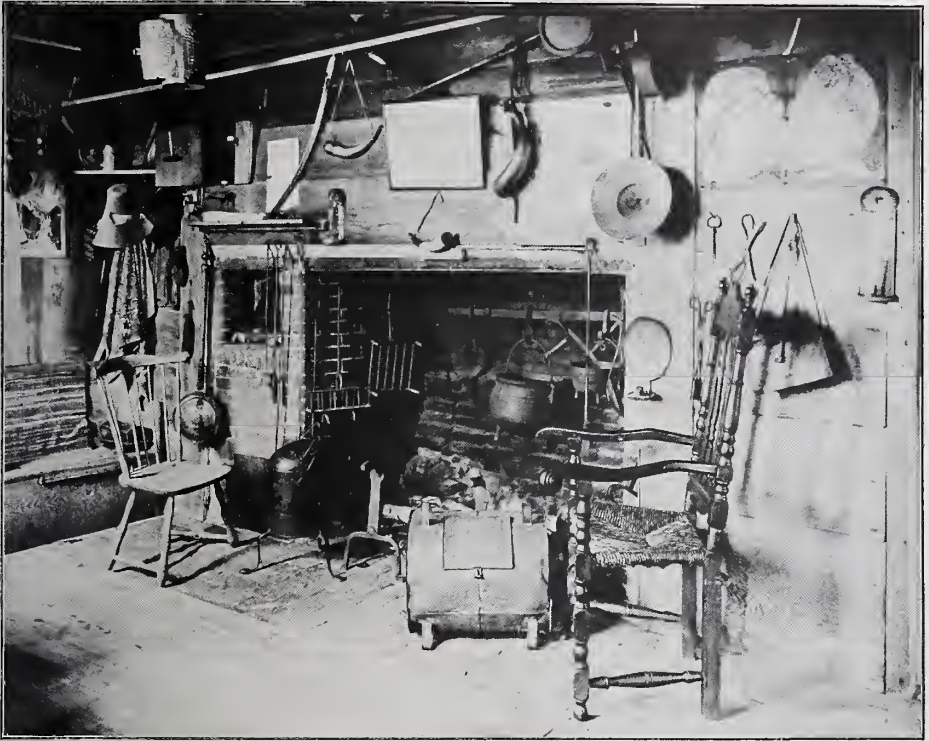
The next competition falls due on December 31, 1905.

THE ACTION OF METOL AND ORTOL ON THE SKIN.

For many years I have suffered with my hands when using amidol and metol. The symptoms used to extend to my wrists, which would be a complete mass of sores, and my hands and arms itched exceedingly. I have tried almost every kind of ointment without success, but I have at last found a successful remedy as follows. Before developing I grease my hands well with lard, then wipe them so that the grease will not affect the print. After developing I wash my hands with very hot water — as hot as I can bear my hands in. When the grease is removed, I make a solution of alum, one ounce in a pint of water, place my hands in this and allow them to remain for a few minutes. I then wipe them, without further washing them for at least an hour. Since doing this I have had no trouble with my hands, whereas previously they were almost raw. If others who have suffered from the effects of developing as I have will try this I do not think they will suffer again.

F. HUGHES.

Jack and Jill
Went up the hill,
A famous view to find there;
Jack was mad
For Jill — too bad! —
Had left the plates behind her.—*Ex.*



C. M. Whitney,

Bayonne, N. J.

FIRST PRIZE.

**PHOTOGRAPHY: ITS RECOGNITION AS
A FINE ART AND A MEANS OF IN-
DIVIDUAL EXPRESSION.**

Read by Thos. H. Cummings at the National Convention.

Ladies and Gentlemen: Boston is indeed a city rich in historical associations, but among all the memories of the past there is none we of the photographic fraternity in this city prize more highly than the fact that professional photography, of which you are such a distinguished part, first saw the light of day here and took its first rise in the United States sixty-four years ago. It is an actual fact that the first professional studio, with a skylight, ever built in America, was erected here in this city and up to four years ago we had the oldest living professional photographer in the world, Josiah Johnson Hawes, of Boston. Though in the ninety-fourth year of his age, he did his own operating and posing until the

last. His venerable figure and quaint studio in Tremont Row were striking landmarks in this city for over sixty years.

In 1841, only two years after Daguerre had communicated his discovery to the Academy of Sciences in Paris, and in the same year Fox Talbot first gave the Royal Society in London a description of this process for making a negative, Mr. Hawes, our fellow-townsmen, was making Daguerrotypes in Boston. He was a young man of thirty and was painting portraits in oil when Daguerre's representative arrived here, and he took the first agency for his process established in the United States. Two years later, Dr. Draper, of New York, reduced the time of exposure necessary from thirty minutes to twenty-five seconds. And the process being now practical, Mr. Hawes associated with him a partner named Albert Southworth. Together they built the

first skylight for sun pictures ever built in America, and this studio of Hawes & Southworth was famous for nearly half a century for fine portrait work and was one of the sights of this city, located not far from this spot.

Fifty years ago was also the golden age of literature, art and oratory in Boston. There were Daniel Webster, Rufus Choate, Charles Sumner, Edward Everett, Robert C. Winthrop, all of whom sat for their pictures to Mr. Hawes, and the loftiest peak in all that mountain range of intellect from the standpoint of pure eloquence, Wendell Phillips, the great abolitionist, the silver-tongued tribune of the people. Among his oratorical achievements was a famous lecture called "The Lost Arts," conceded to be the most charming and popular lecture ever delivered from an American platform. It was mainly an attempt to prove that the ancients surpassed the moderns in all kinds of knowledge, whether of the sciences or the arts. There are certain lines, he used to say, in which the moderns are content to acknowledge their indebtedness to the ancients. Take poetry, painting, sculpture, architecture and the drama and anything that relates to beauty in any form, the modern world takes its inspiration from the ancient.

You tell the poet that his lines remind you of Homer, and he is crazy with delight. Stand in front of a painting, in hearing of an artist, and compare its coloring with a Titian or a Raphael, and he will remember you forever. I remember once standing in front of a bit of marble in Rome carved by Powers, a Vermonter. I said to an Italian standing near, "Well, now, that seems to me to be perfection." "To be perfection," shrugging his shoulders, "Why, sir, that reminds me of Phidias," as if to remind one of that Greek was a greater compliment than to perfection. And so he concluded that this very choice of phrases betrayed a confession of inferiority and we of the modern world, he added, have hardly a single line or sweep of beauty to the antique.

I wish that Mr. Phillips could have

been present here to-day to see and to hear this story of Art in Photography as told by this quarter-century Convention of the Photographers' Association of America. Photography, youngest among the graphic arts, not a lost art, but a distinctly new and modern art, unknown to the ancients, invented, developed and wholly perfected by the people of our day and generation. I wish it had been permitted him, I say, to stand here to-day with all his polite knowledge of ancient and modern times, and to realize as we are privileged to, the perfection to which this art has now grown.

How, within the brief space of fifty years it has grown from a vague suggestion of an image on a metallic plate, in the days of Daguerre and Fox Talbot, to a rich carbon or platinum print of to-day, technically superb and artistically perfect — sometimes as beautiful as anything the painters can give us. Composition, tone, color, all combined to produce beauty. At last, he would say, for Mr. Phillips was honest, there is something new under the sun and that is a sun picture. This arrangement of line, this development of curves, this massing of light and shade, is as an Italian master would compose in the fifteenth century. There is a new era of light dawning in photography — it is a strictly modern form of expressing art and beauty never before anticipated by the ancients.

I am announced to speak to you this morning on the "Recognition of Photography as a Fine Art." When this announcement was first made public, some of my editorial friends among the fraternity said, "Cut it out," "Make it short, Cummings, the conventions are done to death on this subject of art." I countered on them by saying that they were so swallowed up by the tide of commercialism, chasing the almighty dollar, that they lost sight of the highest interest of the profession. However, I promise not to detain you long in dealing with my story attributed to the Father of our Country, General George Washington, of a man who

went into a Revolutionary inn and asked for a drink. The landlord, who was a little penurious, pushed out a wine glass about half the usual size and when the man had swallowed the contents in one gulp, the landlord turned to him and said, "That glass out of which you are drinking is forty years old." "Well," said the thirsty traveler, contemplating its diminutive size, "it's the smallest thing of its age I ever saw, and the man who blew it had a very short breath——."

Now, photography is sixty odd years old, but unlike the wine glass, it is the biggest thing for its age that I ever saw. Why, do you know that it took painting a thousand years and the arts of wood engraving and etching five hundred years each to secure recognition from the world as fine arts. But photography in fifty years has risen to the same level, and if we may judge the future by the past, it bids fair to distance all the others in the field of art expression. Like electricity in the scientific world, it is the coming agency in the artistic world because it offers a solution of combining the useful and the beautiful. I sometimes wonder if the average professional photographer appreciates to the fullest the dignity of this calling. Photography to-day is an economic necessity in every community. No well-regulated society can afford to be without the memory and affections of family life through the pictures it makes.

When the author of Green's History of England was asked what, in his opinion, was the greatest boon that has been conferred on the poorer classes in later years, he promptly answered "Photography"—six-penny photographs, "because," he said, "counteracting the tendencies social and industrial in society which every day are sapping the healthier family affections, the six-penny photograph is doing more for the poor of England, to keep alive their love for each other, than all the philanthropists of the world." We all know and appreciate the comfort and consolation of having photographs in our homes of those whom we love, who are near and

dear to us but have joined the majority. Take, for instance, the picture of a dear, old mother, a picture so majestic and sacred and withal so common that even art approaches it timidly. I speak of the humble type of mother, who stands to-day in every-day life, I think the saddest and noblest of human wrecks. You have met her, a type in every community, in her social gathering. Her face is furrowed and care-worn. Her wrinkled hands are crossed on her lap. She has given away the better part of her life ungrudgingly to help others and now lies stranded and waiting on the bleak coast of life. Where are the children into whom she drained all her love? The very conditions of existence seem to demand that they shall neglect, if they do not forget her. Nature decreed that they shall give the affection which she has fostered and nurtured to some one else.

It is only when we come back home to see the old, wrinkled hands tied together at the wrists and stare down for the last time into the dear familiar face in the cold rigidity of death, that there surges up in us all the feelings of a pent-up sorrow. Then we remember the photographer of mother with gratitude and tears and then we understand that photography is truly

"The art that secures the shadow

Ere the substance vanishes."

If we could take the pathos out of photography, we would rob it of one of its greatest values and chief charms. Yet, this is but one of the many ways in which the influence of photography is felt in the life of the world to-day. Its value as an aid to research, to study, and to the diffusion of knowledge of every sort and kind is known to every one. It has grown from a popular science to a world-embracing industry, entering into every science and art.

I am to speak to you on one phase only, namely: "The Recognition of Photography as a Fine Art"—the camera a medium of individual expression. What is art? I remember one definition given us at Buffalo, in 1902, by Elbert Hubbard, who said that art, in

his opinion, was largely a matter of haircut and neckties. Inasmuch as Hubbard needed a haircut badly and wore a flowing necktie, the audience caught the point and laughed heartily with the joker. But later on, this same speaker said that art was the beautiful way of doing things, and the expression of a man's joy in his work. Which recalled to my mind some remarks by Pirie MacDonald, made at the N. E. Convention in 1889. He said: "I have made money and have spent it — and I will make more money and spend it to satisfy my hunger for the beautiful in photography. But I tell you I have not made my pictures for money alone. I have made them because I loved to make them. I had a yearning to create something beautiful and that love in me enabled me to delight in taking infinite trouble and pains. My purpose is accomplished if I can make you want to make something beautiful merely because it is beautiful. For the door of these things beautiful is only open to those who love the road that leads to it." After all is said these definitions of art are narrow and limited to one point of view. Art is something more than the beautiful way of doing things, which is composition, selection, is more than the expression of a man's joy in his work, which is temperament. It must also include the creative faculty.

The artist must first think of his subject in a certain effect or design. In photography he must think of his subject in lights and shades, beauty of line, etc., and having created the effect he imagined he then takes its picture. In this way the creative imagination comes into photography with design; and when they both come into any art, that art becomes a fine art. It is not the beauty of the subject, but the beauty of the form which the imagination of the artist gives to the subject that makes it a fine art. Here is where the value of art training comes in. It helps the artist to create something in a design, and this design must be beautiful in itself, apart from what it suggests or signifies, to be artistic. In other words, it is a pity

that some of you had not done some more studying of art when you were boys — you might have grown up making handsome pictures now.

Somebody asked a famous painter once, what he mixed his paints with? and he promptly answered, "With brains, sir!" One of the best known and most successful photographers in this country once remarked to me that composition was nine-tenths of the game in every great picture, "for, then," he added, "photography becomes allied with art, since it is then that photography and brains are mixed." In the last analysis is this true?

The recognition of photography as a fine art implies the mixing of brains with a temperament to put personal expression into a picture. Furthermore, it is not enough that one should possess a knowledge of the principles of art, and have the artistic feeling, one should also so control the photographic process that the picture will in the finished result tell the character and purpose of the photographer himself. It should express his thought and meaning and so individualize that it could not be mistaken for anybody's but his. Such a man spells himself an artist, whether he be a painter, sculptor, silversmith or photographer. The painter, for instance, strives to render his impression of the pictures he wishes to express through the medium of his brush and palette as truthfully as possible.

The artist photographer does the same thing in making an artistic photograph with his camera. Barring color and the ability to render certain relative values, his picture represents and expresses his impression of the beauty he wishes to see. Hence it is that we call his work art, and the worker an artist. Of course, there are those who object to this reasoning — I know painters in this city who still claim that art and photography are contradictions in terms. Art, they say, stands for refined emotion and feeling and calls for a high order of intelligence, while photography is something purely mechanical.

The merciless severity of the paper, plates, lens and chemicals prevents the photographer from seeing beauty and expressing his vision so that others may

tions as a medium—the same is true in a varying degree of every known medium of art. The brush, the chisel and the pencil all have limitations. It



J. B. Borry,

Thief River Falls, Minn.

THIRD PRIZE.

see it in his picture. If all this were true, it would be folly indeed for us to discuss, much less maintain, that photography is a fine art. Admit that the camera is mechanical and has its limita-

is the personal element, after all, that is the most powerful factor in art and in artistic picture-making. In just so far as a photograph is distinguished from a mere record of fact and expresses a

personal element it assumes importance as a work of art. Furthermore, as art in the photograph is expressed according to our ideas of beauty as we see it, we infuse into the work our own idea, which means our personality. This is what is called individuality in picture-making. And when this is accompanied by the ability to see beauty and to make others see it in a photograph, we call it art and the man who is capable of such work an artist. The camera is here again a medium for individual expression. If the picture shows temperament and a personal intent on the part of the photographer to express beauty, it must be called artistic in spite of all the painters of Christendom.

On the other hand, we admit that no man, except by accident, can express his idea of beauty in a picture and make others see it without having first mastered the principles that underlie art itself. In all these arts there are certain conventions that are generally accepted for success. For instance, in music, there are the scales, chords and harmonies, which, if they are wanting, turn the composition into discord and noise. So also in painting, if the conventions are wanting, the painting falls down.

Photography is like painting, since both are pictorial, both follow the same rules in composition, the arrangement of light and shade, both portray the beauty and grandeur of nature and both are dependent upon the mind and knowledge of the artist for success. Unless a photographer is something more than a mere recorder of facts, he does not portray beauty nor does he give pleasure and he is, therefore, not an artist. Again, I repeat, to be artistic, the photograph must be pictorial, follow the accepted rules of composition, light and shade, and express beauty in an unmistakable way. It must show temperament and a personal intent on the part of the photographer to express beauty to be called art. And all these principles of art may be learned from the works of the great masters. They are briefly summed up in one word, selection of composition.

Regarding composition, I will not speak now, as there are speakers better qualified than myself already announced to address you on this subject. They are familiar with the technicalities of the subject. While I am simply a photographic editor, always on the watch for manifestations of art in any form and seeking to voice for you for the hopes and aspirations of your profession, even here in this convention, I venture to say there are pictures hung which represent real art, genuine, vital, personal art. I think I can safely say, without fear of contradiction, that photography in general is to-day showing art in a greater degree than one may find in most contemporary exhibitions of paintings, and second only to that which now and then appears in the work of individual painters, like the Copley shows of Sargent, Whistler and Money, held in this city in recent years.

Do not misunderstand me as claiming for photography an equality with painting in the matters of artistic expression. What I do claim is this, that in spite of its mechanical limitations, photography is to-day being exploited more intelligently as a mode of real art expression than some of the older mediums. There are painters to-day who still create, but they are few in number. A photograph made by a man who seeks to express his individuality in his work is much to be preferred to a painting by an indifferent artist, however skilfully made. It is this attempt to create something new and vital that gives life to the Fine Art School of Photography. Though still an undeveloped medium compared with painters and fettered with technical difficulties, when photography goes back to the fundamental laws of art and produces results such as we have in this convention, its recognition as a fine art can not be long delayed.

I suppose if any one should ask me this point: What quality gave the greatest value to a picture as a work of art? I should say, "Feeling—refined and cultured feeling." The composition may be perfect, the lines and masses of the

pictures may be balanced with the utmost harmony, the values may be true, but the one necessary quality to bind them all together is fine, poetic quality or feeling which always characterizes a real work of art. For art is not an affair of argument, but rather feeling. If you feel a picture to be wrong — it can't be right. It reminds me of the story of the Irishman who met a friend who said, "Why, sir, I heard you were dead." "Well," says the man, "I suppose you see I am not." "Oh, no," says he, "I feel like believing the man who told me a good deal quicker than I would you." "Well," says Pat, "You may feel as you like, but divil a bit of me is dead; I don't feel — I know."

Sensitiveness to beauty is the chief characteristic and help for the production of this quality of refined feeling in a picture. Some have it in greater degree than others, while nearly all can cultivate it. By constant observation and the study of nature, poetry and of the acknowledged masters of the art of painting, one can educate oneself to an artistic perception of what is right in picture-making. To eliminate the commonplace and the vulgar and substitute for it refined poetic feeling is the task we should set for ourselves, keeping in view the limitations of our medium and not attempting the impossible by monkeying too much with the negative. We will inject personal feeling into our work unconsciously and it will give us in large measure satisfaction and delight.

Perhaps one of the strongest arguments to prove the claims of photography to be a fine art lies in the fact that it is evolutionary like all arts. Not only are individual workers created whose style can be easily differentiated from that of others — but national schools of photography are being evolved. National schools in photography exist. What may be dignified by the name of a national school of photography, exists in Belgium, England, Germany and in France; and even in the outlying regions of Russia, India and Australia, there exist earnest work-

ers striving to lift photography to the rank of an art.

In Belgium we find a mixed nation, speaking two languages, and its photography is accordingly imbued with both French and German characteristics, but it is quite distinct from both. As the Flemish painters for many years have been striving to bring back the glory of their nation in art, by again reproducing national feelings, so also the photographers to-day are forming a national school by expressing national characteristics.

In England, despite the separation of photographers in two groups, the Royal and the Linked Ring, a unanimity of thought, feeling and expression pervades the whole work. The English photographer, with few exceptions, stays at home and photographs what is about him, his meadows, his cathedrals, his people, his home, and this love of home is the key-note of English character and success. His love of truth is reflected in his care for detail, his aversion to faking, and his inclination to make straight prints.

In the photographic words of Demachy, Dubreuil, Puyo, Le Begue, Lemoine, Madame Binder-Mestro, and the others in France, we find all of the same general character; pictures full of grace and beauty. Graceful women posed nude or wonderfully draped; pleasing genre studies and landscapes full of tender beauty and the grace of cultivated parks; all the signs of civilization far advanced and possibly decadent. In other words, French photography portrays the national character just as the erotic and stylistic French literature and the impressionistic and sensuous French paintings of to-day do.

On the other side of the Rhine, in Germany, we find quite a different style of photography. Here are the masters of simplicity in landscape and portrait composition; every exhibition of German photography is given its key by the massive and magnificent large gum-prints in one or several colors by the Hofmeisters, Kuhn, Henneberg, Percheid, and a dozen others as strong as

they. The admiration for great size is a part of the German national character; Wilhelm is always seeking to widen German influence, to make his country great in war, commerce, in diplomacy, in world-mastery. The simplicity of the composition of these pictures reflects the Germany tendency to concentration, to bending all efforts to a single end. Finally, the somewhat gloomy and fantastic effect of these pictures reveals the imaginative strain so prominent in all German thought, a relic of their northern ancestry. Thus in all things, German photography reveals the national character.

We might pursue the analogy, but enough has been said to show that in each of the great progressive countries of Europe, national character has made possible and has created a national school of photography.

In the beginning with the long exposure necessary for the Daguerreotype, any distinct striving after artistic effect was hardly possible, yet, for pure beauty, some of the Daguerreotypes of those early days can be ranked among the finest portraits ever taken by photography. The character of the sitter is especially well rendered by this early process, because the long exposure rendered any set expression impossible and the face inevitably assumed its natural resting position. The composition of many of these pictures is admirable. As the Daguerrotype gave place to the Ambrotype and later to the *carte de visite*, the quality of the pictures constantly deteriorated. Even in this lowest depth of photography, however, some valiant spirits strove for better things. Dr. O. Hill, of Perth, in Scotland, made some especially noteworthy pictures, although handicapped by hoop-skirts and poke bonnets, and here and there other workers such as P. S. Emerson, the author of "Naturalistic Photography."

Mrs. Cameron, H. P. Robinson, and others set a high standard of artistic work in landscape and in genre. These efforts of a few individuals, however, did not leaven the mass, and up to

within fifteen years, the ideal of even exhibition judges was microscopic detail and pure white skies.

At about this period, photographers in many countries began to show an inclination toward more feeling in their photographic work. The first manifestation of this was that a group of artistically inclined men, members of the Royal Photographic Society of England, who felt that the jury of that body could not appreciate their artistic ideas, withdrew from the society and formed an organization entitled, "The Linked Ring," instituting an annual exhibition in London called the Salon. Thirteen times now has this society had its annual exhibition. The result has been one which the seceders did not contemplate. The artistic standard of the Royal Photographic Society has steadily advanced until, last year, one might have supposed that the same jury had passed the pictures for both. In fact, many pictures were hung in both exhibitions, and one photograph by Dr. Detlefsen, of Chicago, which was passed by the Salon jury for its artistic merit, was at the Royal Photographic Society, relegated to the technical section. A proposition has been seriously made to reunite the two societies, and were it not for a few strong personal animosities this might possibly take place. At all events, the artistic leaven has penetrated all classes in England. The same process has taken place in other countries. In the United States we are only too familiar with the formation and history of the photo secession, which has assumed to be the sole arbiter of photographic merit in this great country. We know also that the Salon Club of America, an earnest body of younger workers, has started an active and virile protest against the monopolistic methods of the photo secession; that its first exhibition has been held with great success in New York and the other principal cities of the United States, and that the preparations for the second Salon are now in full swing. In this country again, therefore, the artistic leaven is working everywhere. The ex-



S. S. Lloyd,

Buffalo, N. Y.

THIRD PRIZE.

hibitions of this country have nearly always touched the high mark of cultivated mind in photography. So that both amateur and professional photography in the United States is rapidly approaching, if it has not already reached, a high position among the graphic arts.

Finally, there is the official recognition that has come to photography from those various learned and artistic bodies of the world who accept photography as a fine art. At the recent expositions at Genoa, Turin, Lille and Glasgow, photographs were hung in the fine arts section, and they were regarded as on a footing of perfect equality with the graphic arts. At Dresden, Munich and Berlin, the three great fine arts exhibits of Germany, photographs are received and hung. At Dresden last year 203 photos were shown in a separate pavilion, hung side by side with etchings, wood engravings, lithographs and other forms of the graphic arts. At the

secession exhibition at Munich, photographs were received and hung, while in Paris last year at the autumn exhibition held in the Petit Palace, over forty photographs were hung, giving the first formal recognition to photography from the highest tribunal of fine arts in the world.

With these facts in your possession, what more need I say to persuade you of the truth of my contention that photography is indeed a fine art by acknowledgment and recognition?

Gentlemen of the Convention: The divine gift which is a vital part of your profession, of being able to see, feel and create beauty in your photographs, is of priceless value. Not for all the wealth of Rockefeller, Carnegie, Vanderbilt and Astor would you exchange it, this power, this love of the beautiful in nature and in humanity. Great composers set it to music in symphonies — great orators express it in words that burn and live — great sculptors will

carve it in marble and stone — while great photographers will fix the fleeting image on glass and paper.

When you stand before your model with camera and plates ready, if your heart is glowing with the love of color, tone and the sweep of beautiful lines, somewhere within you will come this divine sense of the power to create. It is the spirit of art stirring within you. The vision may fade away, but your image will live in your picture to tell of your love in color and line. The love of art never dies. It will be the triumph of art in photography — and you will go down the long road when the final summons comes, with your face lifted to the stars supremely happy. For death will never harm those who love truth and beauty, only set you free from your limitations and give your soul the wings of genius.

WORKING-IN BACKGROUNDS.

The easiest way to treat background (says a writer in *Chic*) is by using, not washes of color, but powdered chalks. Have some black chalk (*sauce à velours*) and white chalk scraped to a fine powder. The black chalk, plus a little fine black lead, thinned down with fine pumice, will yield a blue-black for matt bromids. The black and white chalk plus a little powdered sepia chalk will make a good "warm platinum" mixture. The mixture is to be rubbed down with a piece of cotton wool, or chamois leather stretched over the finger, care being taken to work off all the grit on the other hand before touching the print. With a circular motion, rub in the cloudy effect desired, rubbing it on where most required, and reducing it by further rubbing and spreading if not required. Some practice will be necessary to prevent the clouds infringing on the face or spreading too far toward the edges of the print. Dainty effects can be introduced, and surplus work removed, with a sharply pointed piece of good india-rubber. This can be used to make serrated edges to the clouds and thus give them a billowy effect.

DRYING NEGATIVES.

The utmost care should be taken in drying negatives after developing and washing. An otherwise excellent negative may be ruined by injudicious drying. The plate (says the *Bazaar*) should be dried gradually in a place free from dust. If placed on the window-sill to dry (as is the practice of some amateurs) in the open air, there is always a risk of specks of dust, or even larger particles, alighting on the film. If placed in the sunshine the film may be melted and disfigured. A disused meat-safe makes a good receptacle for wet negatives, placed in it to dry; but a much simpler plan, and one which the writer has found to work with perfect satisfaction, is to use the space above the hot-water tank which supplies the bath. Most houses nowadays have a bathroom, and the warm space above the hot-water tank is just the place for drying negatives. Some 6-inch nails should be driven into the walls, about a foot above the tank, at suitable intervals, and the negative resting between these, corner downward, and leaning against the wall, will dry evenly and with comparative quickness, while if the door be closed no dust will get on to the plates.

THE following method for obtaining brown tones on bromid prints is recommended. Wash the print well after fixing and immerse in a bath of

Tincture of iodine 1 ounce.
Water to 10 ounces.

till the image is bleached a yellowish white. It matters not if the paper turns a deep blue. After a thorough washing, place the print in a ten per cent solution of sodium sulphite until the paper becomes white. Wash for ten minutes and immerse in

Sodium sulphid (not sulphite) ¼ ounce.
Water 10 ounces.

After which wash well and dry. The shorter the time the print soaks in the iodine bath the blacker the color and vice versa. The iodine bath may be used repeatedly.

SOFT PRINTS FROM HARD NEGATIVES.

Every photographer who has any stock of negatives at all must among them have a number which are good in every particular but one—they are too vigorous. They yield hard prints, not from underexposure, but from the de-

risky. This was the case with the writer when he came across an article in an old "Barnet" book, dealing with the "Carbon Process."

It stated at the outset that the process was suitable for making reproduced negatives from hard originals; and as it involved no risk to the original nega-



Wm. S. Rice,

Stockton, Cal.

SECOND PRIZE.

velopment having been continued a little too long. The cure that is generally suggested is the use of ammonium persulphate. But ammonium persulphate is not always to hand; moreover, there are many who do not care to expose negatives which they value to a reducing process, which is at the least

tives themselves it was at once attempted. In the article, both the special transparency tissue was referred to and another "extra special" tissue for extremely hard negatives. But, as none of the former happened to be in stock, and the latter seemed only to be made to order and in large quantities, some

"engraving black" tissue which was handy was used. The method of using it will be described. The results were all that could be wished.

A dozen pieces of glass (spoiled negatives) were thoroughly cleaned, first with hot water and a scrubbing brush, then with plenty of soap and water, and were finally well rinsed in clean, cold water. In the meanwhile, a quarter of an ounce of gelatin had been allowed to soak in cold water, then warmed up until it all dissolved, and finally mixed with twenty grains of potassium bichromate dissolved in an ounce of water. Warm water was added to this mixture until it measured a pint, and in this the clean wet glass was immersed for a few seconds, and then stood up to dry. When dry, they were stood in the rack in daylight for a few hours, by which means the coating of bichromated gelatin on the glass became insoluble.

The tissue was sensitized by floating it for two minutes on a bath prepared on the lines of one of those recommended by Mr. Bennett, but as soft results were wanted the bath was made stronger than he advised as the average strength. It was as follows:

Potassium bichromate	....	1 ounce
Citric acid	.....	1 dram
Water	.....	40 ounces

Strong ammonia sufficient to change the color from red to yellow. The tissue was hung up to dry in an ordinary room in the evening, and was used the following day.

The exposure requires to be fuller than when paper prints are being made, and must be judged with an actinometer. After exposure the tissue is placed in water, and it will be seen to curl, with the pigmented side inwards. In a few moments it begins to uncurl, and as soon as this is noticed it is taken out of the water, laid upon one of the dry prepared glasses, and lightly squeegeed into contact. A few pieces of blotting-paper are put on the top, and it is then put on one side for a few minutes. In ten minutes it is ready for development.

This should be performed with water

at such a temperature that the hand can bear it comfortably, as the risk of bubbles and blisters is thus reduced to a minimum. The glass with the tissue on its surface is simply laid, glass downward, in the warm water and left there for three or four minutes. At the end of that time one corner of the paper is raised with a pin and the paper is pulled off. Gentle motion of the dish in which the plate is lying will then speedily develop up the transparency, which, if all has gone well, will be a faithful rendering of the original negative, but with a great deal of its excessive contrast reduced. Provided that the exposure has been long enough to give a perceptible shade, even on the highest lights of the picture, all will be well.

From the positive transparency so obtained, I made a fresh negative by a repetition of the process, printing from the transparency on to tissue, developing, etc., as set forth above. The result was a set of soft, harmonious, quick-printing negatives, suitable for direct enlarging on bromid paper, although the originals gave a hard contact print by every process I had tried.—*Photography*.

THOMAS OVERTON.

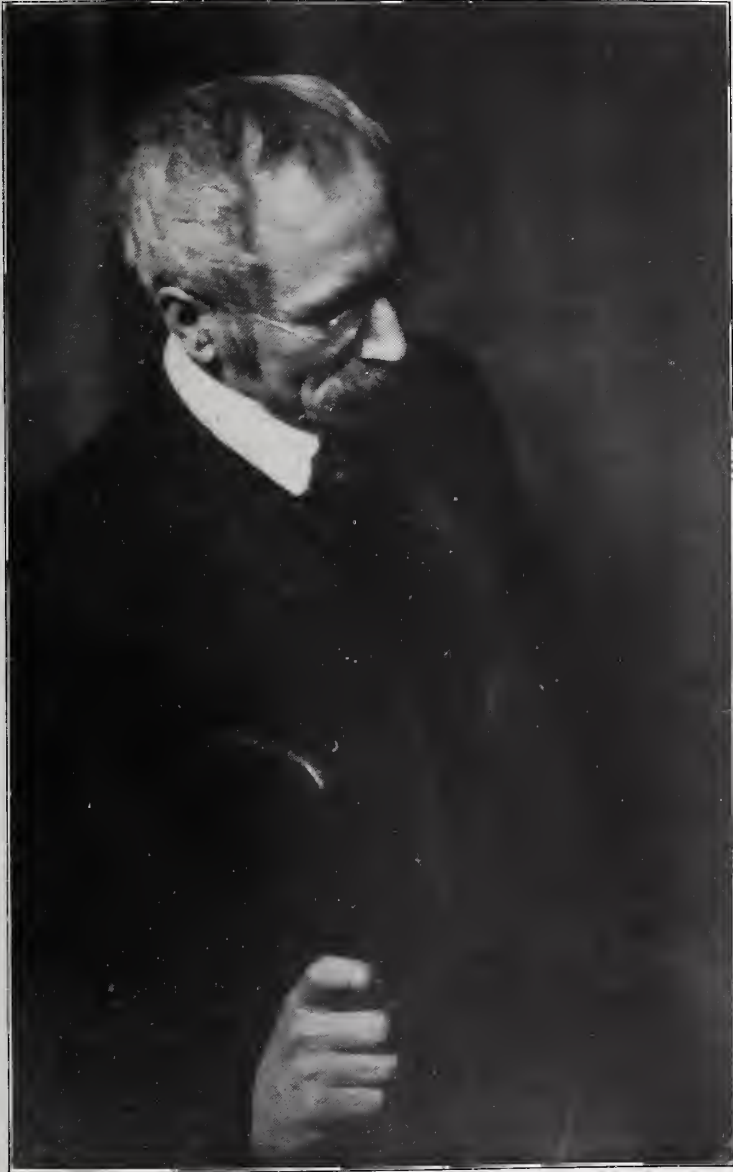
WELL do I remember, moreover, that my second camera was of the hand or fist variety. It had what was called a rebounding shutter. Under the fiery impulse of a multiple elastic band it rebounded. Ye gods, how it rebounded! On one occasion I took a two-horsed fire engine pounding along a London street. The shutter rebounded and rebounded under an additional twist or two of the elastic band, so that my negative showed 139 fire engines with 278 horses. And each of the horses was legged like unto a centipede. It is only fair to state, though, that to average up matters that shutter, on occasion, only accomplished a bound instead of a rebound. It flew up and stopped up, and thereby gave an exposure that lasted from the moment of release to the moment of discovery.

The Photo-Beacon Exposure Tables are guaranteed correct. Price 25 cents.

CATS AND THE CAMERA.

Mr. E. Landor, of Ealing, has done as much as anybody to show the world what charming pictures may be made of

have their own particular ways of working. Carine Cadby is another well-known worker who is no less successful with animals than in her better-known



S. D. Lisle,

Chicago.

kittens, and his methods of working have often been published; but what is one man's meat is another man's poison; that is to say, all photographers of cats

studies of plants and flowers. In an article on "Cats and the Camera" in a recent number of *The Photogram*, Mrs. Cadby says: "Some snap-shots

of cat subjects may be successful and interesting, but for certainty and good quality of negative I advise focusing first. Out of doors in summer an instantaneous exposure can be given, and in a room with a fairly bright light, a quick bulb exposure. Snap-shots of quick movements are almost invariably disappointing; the slower movements and arrested attitudes are far more satisfactory to handle. One does not need any special lens, though it is obvious the quicker the exposure the greater one's chance of success. As a rule, I use a lens stopped down to f -8 or f -16, and try not to err on the side of under-exposure, as there is nothing much more unattractive than an underexposed chalk and soot cat photogram. One wants as much detail in the coat as possible, and one does not want to miss any of the charming gradations of light and shade. If one wishes for a soft, drawing-like effect, it is necessary to be very careful with development, for even a well-exposed negative may become hard and unsatisfactory if too quickly and carelessly developed. A diluted developer and slow development will give the best results. In fact, with cat photography the chief thing needed is patience. We have to exercise our patience with puss before we begin, to be very patient in waiting for attitudes, and again patient in the manipulation of the negative. Hurry must be our one great taboo, for any suspicion of it will ruin our work."

Our bright little contemporary, *Hobbies*, frequently devotes much space to the subject, and below are a few hints culled from a recent issue:

"It may be taken for granted that most amateur photographers have, at some time of their existence, been fired with an ambition to photograph animals; and it may also be taken, nine times out of ten, as an accepted fact that they failed—that is to say, failed to hand down to posterity a successful portrait of the object of their desire; though it is not at all improbable that they may have secured a hydra-headed animal, if the sitter was canine, or if feline, a

furry-looking dot at the extreme edge of the plate, which the operator doubtless declared was the tip of Fluff's vanishing tail.

"The observant amateur who essays animal photography will make one discovery at the outset, namely, that animals—and cats in particular—have infinitely more perseverance in doing just what they ought *not* to do than the photographer has in teaching them what they ought to do. Unless he is endowed with much patience, indeed, he had better not take up this particular branch of photography, for not only will he lose his temper, and thereby the confidence of his animal friends, but he will also spoil many plates. With regard to plates, let nothing but the very best be used. Dogs, as a rule, make the most satisfactory subjects, and are certainly better than cats for the beginner to try his 'prentice hand' on. Having decided upon a suitable background for your picture, it is far the best plan to focus it, and get all ready before introducing the chief subject, for once a kitten (or cat for the matter of that) has taken it into its head that it dislikes being photographed, nothing will persuade it to submit tamely to the indignity. (Of course, it is taken for granted the process is instantaneous, for with kittens especially time exposure is practically out of the question.) Having focused your background, get some one to put puss in the required position, and at once *snap*.

"If this arrangement is impracticable, and you have to pose the subject yourself, you must still have all ready, lay in an unlimited stock of patience, and persuade puss to do the same. If your apparatus is in a place which is not accessible to the cats in the ordinary way, let them move about in it for an hour or so before commencing work. The feeling of strangeness will soon wear off. The writer has tried the plan of placing a tid-bit on the place where puss is to pose, with happy results. It makes puss feel what a desirable spot she has found.

"A small handglass is a most useful

adjunct to cat photography, for the most frolicsome kitten will generally regard its glassy prototype for one brief second with astonished wonder, and that second should be seized to secure what should be a charming study. If you are going to photograph a strange cat, make friends with her first. A sure way to puss's good graces is to gently tickle her behind her ear. A cotton reel is a capital plaything—better than the little celluloid balls, which have a happy knack of bouncing on to the floor, with the kitten close in attendance.

"If after a time you find your sitter is getting tired, and you have not been able to secure a satisfactory photograph, treat her gently, so as not to make her feel she is an aggressor, and renew the attempt the following day. Don't treat her just as though she was a machine, to be taken up or put down just as fancy pleases you.

"There are many points which will, of course, occur to the photographer as he goes on and gets to understand his furry little friends better, but the few hints herein contained will be found useful, as they are all from practical experience."—*Photographic News*.

DARKROOM HINTS.

A wet negative should never be stood on a dusty shelf. The dust is picked up by the water and will be found to travel some distance, an inch or more, up the film.

Ordinary white earthenware jugs are the most convenient for making up quantities of solution. In buying them, always make sure that your closed fist will go right down to the bottom of them.

Darkroom pins with glass heads are better than drawing pins when extemporizing a darkroom, as the pin itself is longer.

A strip of flat wood $\frac{1}{4}$ inch thick, 1 inch or $1\frac{1}{2}$ inches wide, and as long as the width of the largest dish used, will be found very convenient. Placed under the dish, it is possible to rock it with one finger without having to lift it at all.

A large wide-mouthed stoppered bot-

tle full of absorbent cotton-wool should find a place in every darkroom. The wool must be kept clean or it is worse than useless—it is a snare.

When a liquid has to be filtered, a tuft of the wool is moistened with the liquid, squeezed out and placed in a funnel. The liquid is poured on, gently at first, so as not to displace the wool, more freely afterward, when the weight of liquid holds it in position, and the clear liquid that runs through is collected. Wool is not such an efficient filter as filtering paper, but it is much more convenient, quicker and answers every photographic purpose.

When a negative is washed, before standing it up to dry, take a fairly large "swab" of the wool, wet it, and slightly squeeze it; then under the tap rub the whole surface of the negative with the wet wool. The advantage of this can be seen by noting the quantity of dirt removed from the negative.

A hook over the sink is very convenient for those who wash negatives in a loose rack in a tank. Instead of using the syphon of the tank, the rack is taken out and hung from the hook for a minute or two with one corner lowest, while the tank is emptied, rinsed and refilled.

Bromid paper should not be worked in the deep red light used for plates, but a light red kept for that purpose. The extra glass will save its cost in a very little while, as in the deep red light it is difficult to judge the depth of the prints.

Whenever taking stock hypo solution from a bottle, the bottle should be shaken, as there is a distinct difference in the strength at the top and bottom of a hypo solution which has stood still for some time. With other chemicals used in photography this is not noticeable.

—*Photography*. W. H. J. EDWARDS.

LOCAL INTENSIFICATION.

To locally intensify negatives, make up a weak solution of anilin orange in methylated spirits and apply where wanted with a camel's-hair brush. The anilin may be modified or removed by rubbing with cotton-wool moistened with water.

B.

SENSITIZING POST-CARDS.

Some methods quoted by M. Quinet give the amateur a wide choice of treatment.

First Method.—The card is brushed over with the following:

Potassium iodid	1.5 grams
Potassium bromid	9 grams
Arrowroot	2 grams
Boiling water	120 c.c.

The cards when thus salted may be preserved for any length of time, and a day or so before being required for use, sensitizing is effected by brushing over with a solution of one part of silver nitrate in two parts of water.

Second Method.—The salting is effected with the following:

Common salt	1 gram
Ordinary phosphate of soda	1 gram
Water	100 c.c.

Sensitizing is with one part of silver nitrate in four parts of water.

Third Method.—The card is first brushed with a solution of one part of ferric oxalate in ten parts of water, and when dry a solution of silver nitrate 1 to 100 is brushed on. After exposure in the printing frame, the image is intensified in the following bath:

Neutral potassium oxalate	200 grams
Oxalic acid	3 grams
Water	1,000 c.c.

A rather thorough washing is now required, after which any ordinary toning-fixing bath may be used.

THERE is an experiment which we should like all those to try who are still believers in the virtues of bromid in a developer. Let them expose two plates on an interior with a window, such as would be expected to be troublesome from halation. Or, if they like it better, let them expose one plate only, and subsequently cut it down the middle, so that half the window falls on one portion and half on the other. One plate, or half the plate, as the case may be, is then developed in a simple solution containing, say, two grains of pyro, twenty grains of sulphite and twenty grains of carbonate to the ounce, taking care not to overdevelop. The other plate may be developed in a solution well-restrained

with bromid, in the way dear to the heart of some of the old-time workers. When both plates are finished, let them be put side by side and the halation in each compared, when it will be found that the plate developed without bromid is far more free from this defect than the other. The experiment is so easy to perform, and so conclusive, that it is difficult to see how the use of bromid is still persisted in by some workers. Of course, the plate should be unbacked for preference, although we have known the difference to be very well shown by a backed plate used under trying conditions.—*Photography.*

TIMES HAVE CHANGED.

In responding to a vote of thanks, which was accorded with that hearty acclamation to which Mr. Hinton's ears must now be fairly well accustomed in Yorkshire, as well as elsewhere, he said that it was particularly gratifying to him to address an audience in Leeds, for it was in Leeds that some ten years ago, he first lectured on this same subject, at a meeting convened by the Leeds Camera Club, but at that time he left with the conviction that not more than two among a large audience regarded him as sane. Pictorial photography was not known among the rank and file of photographers, but after some ten or twelve years of work in the cause of pictorial photography, it was with no small joy he took part in proceedings such as these, where by the magnificent exhibition, three-fourths of which was devoted to pictorial photography, Leeds, supported by all Yorkshire, showed what she now thought of this phase of photography, and, in honoring it, honored herself.

CLEANING BOTTLES.

Every photographer soon gets a stock of empty bottles, but it is not every photographer who knows how to clean them so that they may be used afresh without any risk of contaminating their contents. There is no one invariable method of cleaning bottles; the plan adopted must depend on what has been

in them. The easiest to clean, of course, are those which have contained preparations which are freely soluble in water, such as pyro, sulphite, sulphocyanid, etc. Thorough rinsing with clean water and draining thoroughly between whites will soon get them perfectly clean. Solutions of various kinds used in photography frequently leave a firm deposit on the bottom of the bottle

will not move the deposit, nitric acid may be tried, or if the stain is due to potassium permanganate, oxalic acid may be used. If it resists all these, better throw the bottle away. Grease and oil should be removed first with a little benzole and the bottle afterward should be well cleansed with a hot solution of washing soda and then well washed in clean water. Caustic alkalies should



F. E. Bronson,

Hornellsville, N. Y.

that has contained them. Strong hydrochloric acid will usually move this, if left in the bottle long enough and shaken up from time to time. There is no need to waste the acid, as it may be put aside after use for this purpose until more cleaning has to be done. Only do not use it for clearing platinum prints after it has seen service as a bottle cleanser. If strong hydrochloric acid

not be employed for cleaning bottles to be used for photography, as they attack the glass and in time destroy its surface; moreover they are extremely difficult to remove. Bottles should never be dried out, but after thorough rinsing should be left upside down to drain and dry, the mouth itself being left open. A clean stopper is as important as a clean bottle.

"SOLGRAM PHOTOGRAPHS."

Those who are interested in color photography and were present at the New York Camera Club on the evening of October 12 were fortunate in having brought to their notice a new process for producing photographs in color, invented by Mr. W. C. South, and christened "Solgram Color Photography."

Having made a journey from Philadelphia specially for this lecture, the members had done all they could to insure him a hearty reception. An invitation to members to bring their friends resulted in the large clubroom being well filled by an interested gathering of members and friends, among whom were quite a number of ladies, who were treated to a fine exhibition of lantern slides, mainly the work of members who had certainly produced some very fine results.

After Mr. W. C. South had been introduced, he proceeded to describe the Solgram or tri-color photographic process. The theory of color photography was carefully described and the rudiments of using the primary colors in painting. This enabled us to more fully understand the method by which he obtained such beautiful effects.

The facilities of the club had enabled him to make a print in a few minutes with their Cooper-Hewitt light, and after the lecture this was washed off, the demonstrating table being crowded in with interested spectators. The process, as we understand, is applicable to all kinds of photography and from the demonstration given is not by any means difficult to work. Mr. South submitted for our inspection a very fine selection of Solgram pictures in which the colors of nature had been faithfully reproduced; one of them—a cluster of grapes—was certainly a very fine specimen.

To produce true color effects it is necessary to make three negatives through red, violet and green screens, but some wonderful examples were shown to us which had been produced by amateurs from one negative only.

The Solgram process can not be too widely known, and in order to extend its sphere of usefulness, Mr. South will give a demonstration at any camera club whose members would be interested in the subject. Secretaries of clubs wishing a demonstration should communicate with Messrs. G. Gennert, New York and Chicago, who have been appointed trade agents for their districts, and from whom all necessary information can be obtained.

ECLIPSE PHOTOGRAPHS. — Gradually the results of the different expeditions of "eclipse" observers are filtering in, those from Egypt being especially interesting. Professor Turner, whose duty it was to measure the coronal light, took fourteen photographs; Mr. J. H. Reynolds mounted at Assouan his 120-foot reflecting telescope, and with its aid took two photographs which should prove the most valuable of all. The American mission used a camera 40 feet in length, and took eighteen photographs.

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808 SECURITY BUILDING,
CHICAGO, ILLINOIS.

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Wm. S. Rice,

FIRST PRIZE.

Stockton, Cal.

THE PHOTO-BEACON.

EDITED BY F. DUNDAS TODD.

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No. 12.

CAUGHT ON THE FLY.

Once a year, in the month of November, I take a quick run around the large cities between the Missouri river and the Atlantic Ocean, to call on my good customers, as all business men should do, and in addition, as I jocularly explain to the inhabitants of the East, get my annual coating of the thin veneer of civilization that can not be secured in any other part of this continent, excepting on the Atlantic seaboard. It makes the Eastern men feel good for Chicago men to say that kind of a thing, and it does not do the Chicago man any hurt to be pleasant.

Two years ago I gave an account of a similar trip in THE PHOTO-BEACON, and I was simply amazed at the shoals of letters I received from readers telling me how much they enjoyed the article, because it enabled those whom fate compels to stay at home to see something through my eyes, and so enable them to form an impression of what things look like in a different locality. It is in hopes that I may bring again a similar pleasure that I have written this article.

First, let me deal with apparatus, because it will be the most easily disposed of, as there is little new at this season of the year. In Rochester I found the manager of the Rochester Optical Company admiring the latest product of the factory, in the shape of a pocket film pack camera designed for pictures $2\frac{1}{4}$ by $3\frac{1}{4}$ inches. It is certainly the most compact thing of the kind that has yet

been offered to the public, and I was compelled to admire the instrument as much as he was doing — in fact, I ordered one for my own use, as I felt I could always have it in my pocket and not feel inconvenienced in the least.

In the same factory I found the plant superintendent wrestling with the perennial problem of how best to test the speed of a focal plane shutter and at the same time do it quickly and inexpensively. It is a notorious fact that the speed markings of all shutters are far from accurate. As the compiler of popular Exposure Tables, I have more cause to know this than anybody else, and so I became interested at once. Everybody knows that it is possible to test the speed of shutters by making a series of exposures on certain moving objects, but such a test means the expenditure of considerable time and money. My friend, the superintendent, was working on a method whereby the shutter would give a record on a sheet of paper similar to what is got when the curve of a steam engine is taken, and it struck me that the method was a very promising one.

The novelties for next season are closely guarded secrets in all manufacturing establishments, and all I can say is that rumor has it that the developments for 1906 are rather radical and there will be decided changes in the apparatus sent out from Rochester in the spring.

It was in Rochester that I first got in

touch with the new form of the professional movement that is spreading so rapidly over the Eastern States. A year and a half ago I placed before professional photographers a program for the creation of an association that would in my opinion ultimately lead to their benefit in many ways. Everybody seems to have admired it and wished it success, but, like all good photographers, everybody wanted the other fellow to make it successful before he would join. In plain English, any mistake I made was in propounding a complete scheme instead of spending twenty years working toward the same end by gradual evolution. Conditions are forcing the more successful men to organize in order to protect what they have gained, and I found associations in Rochester, New York, Philadelphia and Toledo, the members of which were exceedingly anxious to help themselves and each other, but without very much definite purpose as to how they could do it. In the meantime they were cultivating the grace of good fellowship and mostly trusting that something would turn up ultimately to help them along.

I found the photographers of New York had made one step forward. A profession is invariably characterized by ethics, and up to the present moment it would require a two-million power gas microscope to discover any ethics among photographers. In New York city, however, one unwritten law had been evolved and was being acted up to, and this fact gave me more encouragement as to photography becoming a profession than anything I have yet come across. In Philadelphia the conditions are different, but even there I found that the same law had been evolved in another way. The law is this: "It is unprofessional to copy a print made by a brother photographer now in business and fill an order from the negative, also to make an enlargement from a print." From such small acorns do oak trees grow.

It may surprise many photographers to learn that in these associations there is a strong feeling of discontent with the present conduct of the State and

national associations, the opinion being held very decidedly that as at present conducted they are a useless waste of money, and I hear threats of a concerted movement to make radical changes in them, if it be possible. I must confess my sympathy is largely with the rebels.

The New York City Association is particularly interested in the proposed copyright bill that will be brought up before Congress in 1906. Should a new copyright law be then enacted, little change will be possible for many a long year to come, and it therefore behooves photographers to persistently and insistently press their desires before the committees in charge of the bill. General publishers are exceedingly anxious that photographs be excluded, and therefore thrown into the common heap, that the aforesaid publishers may secure useful material for practically nothing. These publishers are represented in all meetings of the committee by able lawyers, but up to date photography has had as its only defense the voluntary services of Mr. Ben Falk and Mr. Pirie MacDonald, who have done yeoman service in the good of the cause for nothing. The next meeting of the committee is in January, and these two gentlemen insist very strongly that at this final meeting they must have the services of a legal expert in copyright law. The photographers of New York have subscribed fully one-third of the necessary expense, and they look to the members of the profession in the country to help them with the balance. Contributions should be sent at once to Mr. Pirie MacDonald, 141 Broadway, New York. It is now or never, and every professional reader of THE PHOTO-BEACON can at least spare \$1 to help along the good work.

In New York city I also had the pleasure of running over the American pictures selected by the artists' jury for the Second American Salon. It was evident that the jury had set a higher standard than they did a year ago, and the salon will be that much the more interesting. Briefly put, the facts are as follows: There will be 221 American

exhibits by eighty workers, and 132 foreign exhibits by forty-two workers, no less than twelve foreign countries being represented. The special awards were as follows: Mrs. G. A. Braton, Birmingham, England, gained the \$100 purchase prize of the American Federation; James E. Underhill, Brooklyn, New York, gained the \$50 prize offered by "The Country Calendar" for best landscape (American work); George T. Power, Chicago, gained the \$50

ciple, yet at least once a year we have a long visit with each other and discuss our points of view, agree to retain our differences and coöperate for the good of photography wherever possible. There is no man I would rather differ from than Mr. Stieglitz, because he is so genuinely honest about permitting other people to have their point of view while he firmly insists on sticking to his own. But, to return to my subject, I found Mr. Stieglitz over head and



Wm. S. Rice,

Stockton, Cal.

THE DRIFTWOOD GATHERER.

prize offered by the Landmark Publishing Company for best picture of historical landmark.

Speaking of salons reminds me that the Photo-Secection are to have a very interesting series of exhibitions in the Camera Club rooms, New York city, during the winter months, and personally I am very sorry that I got around too soon to see the first. I found my old friend, Mr. Stieglitz — there, I have let the cat out of the bag, we are old friends and have been for over a dozen years, but so many people think we must detest each other because we can not agree on certain points of prin-

ears in preparing for the coming exhibits, and I would earnestly urge every reader within reach of New York city to make it a point to see at least one of them, and he will certainly be repaid.

There are lots of other things I would like to talk about. For instance, I was photographed three times, and had several other things of minor importance happen to me, but space forbids any reference to them and so my narrative must close.

F. DUNDAS TODD.

The Photo-Beacon Exposure Tables are guaranteed correct. Price 25 cents.

ACETONE FORMULA FOR CRAMER PLATES.

A.

Pure water 24 ounces
 Cramer's dry sulphite of
 soda 4 ounces
 (Which will test about 80° by
 hydrometer.)
 Pyrogallie acid 1 ounce

Use melted ice or boiled water, cooled and filtered.

This solution works best while fresh. It can be used as long as it stays clear.

If it is to be kept a long time, put it in small bottles, quite full and tightly corked, to prevent discoloration.

B.

Cramer's (liquid) acetone 1 ounce
 Water 20 ounces

For use mix in the following proportions: 1 ounce A, 10 ounces B.

More Solution A produces more contrast.

Less Solution A produces less contrast.

Use enough developer to keep the plate well covered, and rock the tray gently while developing.

Several plates can be developed in succession by discarding a part of the used developer each time and making it up to the original bulk with fresh.

Do not keep the plate out of the developer too long when examining it or streaks will form.

While with other developers the lights appear first, then the shadows, with this developer they appear simultaneously as though the plate had been overexposed, but by continued development the lights gain gradually in intensity, and as soon as sufficiently dense, development should be stopped.

A NEW REDUCER FOR BROMIDS.

The following method for reducing bromid prints has recently been suggested by M. Fourtier. He suggests it may be useful for local work. A five per cent solution of copper sulphate is mixed with enough solution of potassium carbonate till no further precipitate is formed, the precipitate is collected on a filter and washed with several changes of water, and then dis-

solved in water to which ten per cent of hydrochloric acid has been added. To this clear solution strong solution of ammonia is added till the precipitate first formed is redissolved, the resulting rich blue liquid being a solution of ammonio-chlorid of copper. The actual reducer is:

Ammonio-chlorid of copper solution 1 ounce
 Hypo solution (five per cent) 1 ounce
 Water 20 ounces

The prints should be well soaked in water, laid face upward on a sheet of glass, and then the above solution applied with a small sponge or tuft of cotton-wool. The image rapidly dissolves, and the action can be stopped at once by plunging the print into water. The quantity of water in the above formula may be greatly increased at will, the solution then being less energetic. According to the *Bromid Monthly*, from which we quote, this is only equivalent to making cupric chlorid in a roundabout way, when it might be made more directly by mixing solutions of copper sulphate and common salt, using one-fourth as much of the salt as of the copper sulphate.

NEW FOCUSING RULES FOR HAND-CAMERA WORK.

Professor Pflaundler, after treating of the subject from a mathematical point of view, gives the following two simple rules for focusing, which may be useful to hand-camera workers: 1 (Applicable when the background is not very distant.) Focus on a distance equal to twice the product of the greatest and shortest distance, divided by their sum. Example: Suppose the subject to be a street scene with a house front twenty yards away and a man five yards away, and that both are required sharp, then $(5 \times 20) \div (5 + 20) \times 2 = 8$ yards, the required point to focus on. 2 (Applicable when the background is infinity). Focus on a point just double the distance of the nearest point. Example: Again assuming that the nearest point is five yards, then $2 \times 5 = 10$ yards, the point to focus on.

PICTORIAL COMPETITION No. 91.

Before proceeding to the subject matter of this competition, I feel like printing extracts from two letters that recently came to hand, as samples of what my correspondence is like, but particularly because of the matter they contain. The first letter is from Mr. Porterfield, who wins so many prizes in these competitions. I never ask the judges the reason for their decision and

work is above all things characterized by an effort to express some abstract idea and I always have a great deal of pleasure in figuring out the way in which he has written his story. In a letter recently to hand he says: "It is exceedingly gratifying to read your criticism and note how closely you follow the line of thought which was uppermost in my mind during the time I was working on the picture."



J. Brush Anderson,

Fresno, Cal.

THIRD PRIZE.

so when I come to write criticisms I am merely expressing my own ideas. Now, in the course of a year it may safely be said that I am asked at least one thousand times to give my opinion on some photograph that is placed before me by the maker. Nearly every one of them has the same point in common, which is, that they give absolutely no evidence of thought, and of course it is impossible for me to read what has not been written. Mr. Porterfield's

I quote this letter not so much because of the compliment it gives me, but because I desire for the hundredth time to impress upon those who take part in these competitions this one thing, that in order to be successful, they must be not only good technicians and have knowledge of pictorial principles, but that they must consider these as being simply tools with which they can work to carry out their principal aim, which is to tell some story or write about some

abstract quality, using natural objects merely as words.

It goes without saying that some men are naturally more artistic than others, but not infrequently the pictorial faculty is lying dormant and only needs to be given an impulse from the outside to waken it up. One of the prize winners in Competition No. 89, Mr. W. J. Walters, puts this idea so clearly in his letter that I think it is worth quoting. He says:

"I note from this month's issue of THE PHOTO-BEACON that my print took second in Pictorial Competition No. 89. This is very gratifying to me, as this is the first print I have entered in any competition and I took up photography as a hobby less than a year and a half ago. I had no knowledge of composition until a few months ago, when a friend placed in my hands five years' numbers of THE PHOTO-BEACON — from the beginning of 1900 to the end of 1904. The educational features of a careful reading of these can not be estimated; only those who have been fortunate enough to have the opportunity of reading straight through them can appreciate the wealth of instruction which they contain. It was especially interesting to follow the competitions and your 'straight-from-the-shoulder' criticisms on the prints submitted. The steady improvement in the quality of the prints submitted from year to year was also very noticeable. The only other books on composition which I have studied are your book on 'Home Portraiture' and H. P. Robinson's 'Picture Making by Photography,' both of which I think are very fine."

Coming now to the Snap-shot Competition. Not so many years ago I remember being rather startled when it was suggested that it was possible to secure a pictorial result with a hand camera snap-shot. But in this month's competition there were over a score of prints out of those submitted that could honestly lay claim to the title, and the jury found it no easy matter to award the prizes.

The following are the awards:

First prize — William S. Rice, Stockton, California.

Second prize — Charles Vandervelde, 7 Portsmouth Terrace, Grand Rapids, Michigan.

Third prize — J. Brush Anderson, Fresno, California.

Special mention — M. S. Lovell, Donald E. Matheson, Joseph R. Iglick.

CRITICISM.

In the first-prize picture what strikes me most is the importance of the dog, because if the animal were anywhere else either in or out of the field of view, the composition would be unsatisfactory. Mr. Rice would appear to have known just where the dog ought to be and got it there. I have often said that the man who can make a fine picture by photography deserves more credit than the one who can do it by the pencil, because he must have everything just right at the instant of exposure, while the painter can place each part of his subject just wherever he wants it. Mr. Rice, using very simple material, got everything at the instant the desired effect was before him, hence so much the greater is the credit due to him. I would like to point out both for technical and pictorial reasons the direction in which the light falls. In the average snap-shot work that one sees, the shadows usually fall pretty much away from the camera, but here they come toward the lens, mellowing and softening every object, yet with it all there is a luminosity in the deepest shadows that is very pleasing. The pictorial reason for the light falling in this direction seems to me to be twofold. Hand-spinning is practically an obsolete occupation and those who are acquainted with it are in the evening of life when one wants to mellow the lines that time has written, and this has been accomplished by throwing the figure into shadow. The long lines of the shadow, in a way, suggest the same idea. At first glance I was inclined to find fault with the very light sky, but on second thoughts I am convinced that it is appropriate to the figure because it suggests that the day is behind and that she

Chas. Vandervelde,

SECOND PRIZE.

Grand Rapids, Mich.



is walking into the night. The kind of dog is appropriate, a fat, easy-going animal that would not irritate age by frivolous romping.

The second-prize picture suggests to me the dreariness and monotony of the life of the ordinary day laborer. This subject might have been taken in full sunshine and then we would have had a record of plain facts, but by taking it

in subdued light the photographer was able to express the thought that harmonizes with the work and the men.

The third-prize picture is a splendid photograph of horses on the run, and instantly suggests all the incidents we associate with a fire. Technically, it is very fine, even the hoofs being sharp and clear. The greatest compliment, however, ought to be given to the splen-

did detail on the shadow side of the black horses, which is something very difficult to get in such a subject, especially with such lighting.

F. DUNDAS TODD.

FUTURE COMPETITIONS.

Competition No. 94 — Pictures of children under seven years of age, not necessarily portraits. Closes January 31.

Competition No. 95 — Lantern slides, any subject. Closes February 28.

Competition No. 96 — Snow pictures. Closes March 31.

Competition No. 97 — Waterscapes. Closes April 30.

Competition No. 98 — Branch of a tree without leaves, with special consideration of decorative effect. Closes May 31.

Competition No. 99 — Domestic animals. Closes June 30.

Competition No. 100 — Genre pictures, or pictures that tell a story. Closes July 31.

Competition No. 101 — Branch of a tree with leaves, with special consideration of decorative effect. Closes August 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the sender's name and address, *but nothing else*. The outside of the package in addition to our address, may bear that of sender. Accompanying a letter or post-card should be sent us, giving full particulars of date, light, plate, stop and exposure given; also the printing process.

2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

3. Prints are not returnable.

PRIZES.

First — Books to the value of \$5.

Second — Books to the value of \$2.50.

Third — Books to the value of \$1.

Any books, on any subject, or if preferred, any article we can buy in Chicago.

PROFESSIONAL PORTRAIT COMPETITION No. 22.

Month by month these contests become closer and keener, and I must confess that I feel the task of deciding as to the winner becoming more and more onerous, because where one finds not only fine technical skill but thought in every portrait, it becomes the more difficult to estimate the full value of the effort. The following are my decisions this month:

First prize — Ralph Lane, Brooklyn, New York.

Second prize — J. Edward Hage, Goldsboro, North Carolina.

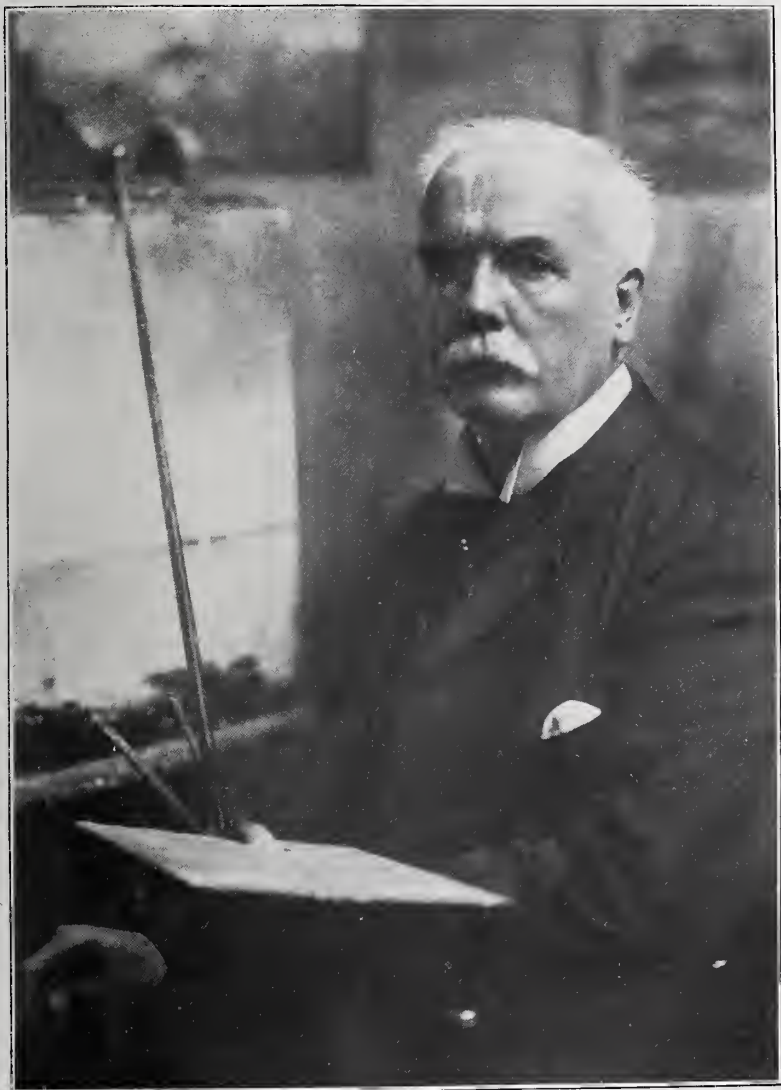
Third prize — J. H. Berkemann, Perry, Iowa.

CRITICISM.

My principal reason for giving this print the first prize is the very fine rendition of planes that is to be found in it. A few months ago I referred to the subject at considerable length, and lest some of my readers may have forgotten exactly what it means, I will refer to it again. A plane is a flat surface, and in art the term is used to indicate a succession of surfaces the one behind the other. Sometimes the term atmosphere is used to indicate the same idea. But whichever term is employed, the expression is used to describe the effect when perspective or distance is well suggested. In a landscape it is often easy to secure distance because the lines of the object, such as roadway, fence, house, etc., by retiring and converging help the illusion. But at the same time in order to get the full effect there must be very delicate gradations in the light and shade throughout the picture, and it is in the securing of these gradations that the artist's skill is shown. In the portrait under consideration we have first the lines of the canvas and of the body helping very decidedly to suggest distance between the nearest point in the portrait and the wall beyond. Anybody could easily secure the help of these lines, and so the amount of credit to be given to the photographer is not so very much. But we get, at least in the original print, a

feeling that there is space between the head of the subject and the wall beyond, due to the beautiful handling of light and shade, and since it is very difficult indeed to get this effect, the credit to

what I might call the mechanical problem that underlies it, and at least two points are to me very evident. The one most noticeable is a slight change in the quality of the background very close to



Ralph Lane,

FIRST PRIZE.

Brooklyn, N. Y.

be allowed the photographer is so much the greater. Recently I have come across a few photographs in which the effect is very pronounced, and I have given a good deal of consideration to

the subject's head; for instance, in this portrait, the very small patch of white just behind the chin and the slight patch of half-tone behind the left ear and neck. But even more important is

the very fine gradation on the parts of the head that are adjacent to the spots, because unless the modeling of the head indicates retiring surfaces, all the faking of the background is utterly worthless. As a consequence of the skilful manipulation, one gets the standing-in effect that ought to be the characteristic of a good portrait. The surface of the paper ought to be considered as a sheet of glass through which we are viewing the subject and, therefore, if we feel that any part of the figure is in front of the surface of the paper, the illusion is not perfect and is to that extent unartistic. This is Mr. Lane's first appearance as a competitor and I have to compliment him on being so successful. He is evidently a master of lighting and has studied with great success the principles laid down by Mr. Inglis. The portrait was made in the artist's studio.

The second and third prize pictures are very excellent specimens of the portrait photography of to-day that is deliverable to all kinds of customers, and I have a suspicion that this high quality of work is more apt to be found in the smaller cities of this country than in the large ones. By that I mean that the percentage of photographers able to make this kind of work is higher outside of our large cities than in them. Its first characteristic is the splendid workmanship that is so marked a feature. Those who make this kind of work are masters in exposing, developing, printing and mounting. Such workmanship ought to be the rule in professional photography, but unfortunately is the exception. The photographer's aim, pictorially, is to make work that will be as artistic as the customers will stand. In both the prints one finds simple but intentional good spacing, very simple arrangement of masses but pleasing, and the lighting is on as simple a plan, but very finely rendered so that everywhere there is very fine gradation. In the portrait of the lady, the cheek in shadow is more inclined to come forward than to go backward, while I would prefer to see more detail and quality in the coat of the gentleman. The dress of the lady

is very much finer rendered and is worth comparing in order to show that it is not essential to cut out all detail entirely. I said much about planes in talking of the first-prize picture and I would point out that in these portraits we find the same beautiful quality, but — and this but is very serious — the faces stand out in front of the paper instead of standing in.

BRIEF MENTION.

Leary — I have written to you direct.

Lovell — The face is simply charming and the portrait must have given great pleasure to the parents. To me the weak point is the neck, which meets the body at too square an angle.

H. E. — Gradation very fine, also the atmospheric effect behind the head. The line of the left arm is not so satisfactory, being stiff.

Strong — Glad to hear, from you, the more especially as your start is a very promising one. Try to avoid shadow extending from eyebrow to cheek. Take special note of the eyes in the prize picture.

Pleas — The boldest and most ambitious thing you have done yet. The large patch above the left shoulder and the smaller one above the head are very harmful.

Lincoln — I like your fine, clean work, but I think if you would just cut loose a little bit you could do much better. Why not devote considerable time to the study of composition? The mount is much too elaborate; fashions have changed.

Chircosta — Lighting very good, but black background for white dress is not a good combination. The view of face is not a happy one because a profile view that shows the cheek beyond the nose is one that should not be taken. Read remarks about mount under the heading of Lincoln.

Godfrey — Not up to your usual standard; pose is too angular and the lighting of the face is too symmetrical. Use light and shade in proportions of one to three or three to one, but hesitate before you make them one and one.

F. DUNDAS TODD.

COMPETITIONS FOR 1906.

Competition No. 24 — Subject: Most varied and pleasing spacing. Prints must be cabinet size, square or oval. The purpose of this contest is to emphasize composition. Read "Elementary Composition," by F. Dundas Todd; price, 10 cents. Competition closes January 31, 1906.

lis' lighting. This is the best introduction to the great problem of portrait lighting. Read "Artistic Lighting," by James Inglis; price, 50 cents. Competition closes March 31, 1906.

Competition No. 27 — Subject: Light line lighting; that is, a profile bust portrait in which a narrow band of light runs down the brow, nose, lip and chin.



J. Edward Hage,

Goldsboro, N. C.

SECOND PRIZE.

Competition No. 25 — Subject: Line. The purpose of this contest is to emphasize the importance of good flowing lines, but competitors should not forget the value of spacing. Prints may be of any size. Competition closes February 28, 1906.

Competition No. 26 — Subject: Ing-

Competition closes April 30, 1906.

Competition No. 28 — Subject: Dark line lighting; that is, a profile bust portrait in which a narrow band of dark runs down the brow, nose, lip and chin. Competition closes May 31, 1906.

Competition No. 29 — Subject: Tone. This is the great photographic problem

and consists of harmonious blending of all the masses of light and dark. Competition closes June 30, 1906.

Competition No. 30—Subject: Given a lady sitter with dark hair, light waist and dark dress, make a three-quarter figure portrait harmonizing the contrasts. Closes July 31, 1906.

Competition No. 31—Subject: Three-quarter Rembrandt; that is, a bust portrait in which the shadow side of the head is toward the lens. The special problem here is to so handle the far-away cheek on which the light falls that it will have the effect of receding instead of appearing to be nearer the lens than the cheek in shadow. Closes August 31, 1906.

Competition No. 32—Subject: Planes; that is, to suggest the solidity and roundness of the sitter's head, also to suggest that the background is decidedly behind the figure and not in contact with it. Competition closes September 30, 1906.

Competition No. 33—Subject: Character. In this competition the photographer must start out with some conception of a predominant emotional quality in the sitter and endeavor to render that idea in the portrait. The photographer must send a letter stating the idea he was trying to render. Competition closes October 31, 1906.

Competition No. 34—Subject: Family group of three, may be adults and a child, or all children. Competition closes November 30, 1906.

Competition No. 35—Subject: A group; no limit as to character or number, but stress should be laid upon the composition and other pictorial qualities. Competition closes December 31, 1906.

RULES.

1. Only one print to be submitted in any one month.

2. The pictures will be judged on the first day of each month, and all prints received prior to that date will be included.

3. Mark outside of package with the words "Portrait Competition," and with sender's name and address.

4. Prints are not returnable.

REMINISCENCES AND RAMBLING RECOLLECTIONS OF EARLY PHOTOGRAPHIC TIMES.

EMBRACING A PERIOD FROM 1839-40, ETC.

CHAPTER IX.

I will now give the details of the published improvements as originally given by the father of photography, Mr. Fox Talbot, in his own words. The only apparatus necessary for the purpose are a few wood frames, a trifle smaller than the sheets of paper to be prepared, two or three soft camel's-hair brushes, some sheets of white blotting-paper, two or three glasses for holding the solutions, and two glass stirring rods.

"First Part of the Preparation of the Paper.—I dissolve 100 grains of crystallized nitrate of silver in six ounces of distilled water; I wash one side of the paper with this solution with a soft camel's-hair brush, and place a mark upon that side by which to know it again. I dry the paper cautiously at a distant fire, or else I leave it to dry spontaneously in a dark place. Next, I dip the paper in a solution of iodid of potassium, containing 500 grains of that salt dissolved in one pint of water; I leave the paper a minute or two in this solution; I then take it out and dip it in water; I then dry it lightly with blotting-paper and finish drying at a fire, or else I leave it to dry spontaneously. All this process is best done in the evening by candlelight. The paper thus far prepared may be called, for the sake of distinction, iodized paper. This iodized paper is scarcely sensitive to light, but nevertheless it should be kept in a portfolio or some dark place till wanted for use. It does not spoil by keeping any length of time, provided it is kept in a portfolio and not exposed to the light.

"Second Part of the Preparation of the Paper.—This second operation is best deferred until the paper is wanted for use. When that time is arrived, I take a sheet of the iodized paper and wash it with a liquid prepared in the following manner: Dissolve 100 grains of crystallized nitrate of silver in two

ounces of distilled water; to this solution add one-sixth of its volume of strong acetic acid; let this mixture be called A; dissolve crystal-

This mixture I shall call by the name of gallo-nitrate of silver. Let no more be mixed than is intended to be used at one time, because the mixture will



J. H. Berkemann,

THIRD PRIZE.

Perry, Iowa.

lized gallic acid in distilled water as much as it will dissolve (which is a very small quantity); let this solution be called B. When you wish to prepare a sheet of paper for use, mix together the liquids A and B in equal volumes.

not keep good for a long period. Then take a sheet of iodized paper and wash it over with this gallo-nitrate of silver, with a soft camel's-hair brush, taking care to wash on the side which has been previously marked. This operation

should be performed by candlelight. Let the paper rest half a minute and then dip it into water; then dry it lightly with blotting-paper, and lastly, dry it cautiously at a fire, holding it at a considerable distance therefrom. When dry, the paper is fit for use, but it is advisable to use it within a few hours after its preparation.

"Note.—That if it is to be used immediately, the last drying may be dispensed with, and the paper may be used moist.

"Note 2.—Instead of using a solution of gallic acid for the liquid B, the tincture of galls diluted with water may be used, but it is not so advisable.

"Use of the Paper.—The paper thus prepared, and which I name calotype paper, is placed in a camera obscura, so as to receive the image formed in the focus of the lens. Of course the paper must be screened or defended from the light during the time it is being put into the camera. When the camera is properly pointed at the object, this screen is withdrawn or a pair of internal folding doors are opened so as to expose the paper for the reception of the image. If the object is very bright, or the time employed is sufficiently long, a sensible image is perceived upon the paper, when it is withdrawn from the camera; but when the time is short or the objects dim, no image whatever is visible upon the paper, which appears entirely blank. Nevertheless, it is impressed with an invisible image, and I have discovered the means of causing this image to become visible. This is performed as follows: I take some gallo-nitrate of silver, prepared in the manner before directed, and with this liquid I wash the paper all over with a soft camel's-hair brush; I then hold it before a gentle fire, and in a short time (varying from a few seconds to a minute or two) the image begins to appear upon the paper. Those parts of the paper upon which light has acted the most strongly become brown or black, while those parts on which the light has not acted remain white. The image continues to strengthen and grow more

and more visible during some time; when it appears strong enough, the operation should be terminated and the picture fixed.

"The Fixing Process.—In order to fix the picture thus obtained, I first dip it in water; I then dry it with blotting-paper, and then wash it with a solution of bromid of potassium, containing 100 grains of the salt dissolved in eight or ten ounces of water. The picture is then washed with water and finally dried. Instead of bromid of potassium, a strong solution of common salt may be used, but it is less advisable. The picture thus obtained will have its lights and shades reversed with respect to the natural objects, namely: the lights of the objects are represented by shades and vice versa. But it is easy from this picture to obtain another, which shall be conformable to nature, namely: in which the lights shall be represented by lights, and the shades by shades. It is only necessary for the purpose to take a second sheet of sensitive calotype paper and place it in close contact with the first, upon which the picture has been formed. A board is put beneath them and a sheet of glass above, and the whole is pressed into close contact by screws.

"Being then placed in sunshine or daylight for a short time, an image or copy is formed upon the second sheet of paper. This image or copy is often invisible at first, but the image may be made to appear in the same way that has been already stated. But I do not recommend that the copy should be taken on calotype paper; on the contrary, I would advise that it should be taken on common photographic paper. This paper is made by washing good writing paper first with a weak solution of common salt, and next with a solution of nitrate of silver. Since it is well known, having been freely communicated to the public by myself in the year 1839, and that it forms no part in the present invention, I need not describe it here more particularly, although it takes a much longer time to obtain a copy upon this paper than upon calo-

type paper. Yet the tints of the copy are generally more harmonious and agreeable. On whatever paper the copy is taken, it should be fixed in the way already described. After a calotype picture has furnished a good many copies, it sometimes grows faint, and the subsequent copies are inferior. This

type picture may be revived and restored, it is possible to strengthen and revive photographs which have been made on other descriptions of sensitive photographic paper; but these are inferior in beauty, and moreover the result is less to be depended on; I therefore do not recommend them.



Donald E. Matheson,

GRAZING.

Reading, Pa.

may be prevented by means of a process which revives the strength of the calotype pictures. In order to do this it is only necessary to wash them by candle-light with gallo-nitrate of silver and then warm them. This causes all the shades of the pictures to darken considerably, while the white parts are unaffected. After this the picture is of course to be fixed a second time. The picture or negative will then yield a second series of copies and a great number of them may frequently be made.

"Note.—In the same way in which I have just explained that a faded calo-

"The next part of my invention consists in a mode of obtaining positive photographic pictures, that is to say photographics in which the lights of the object are represented by lights and the shades by shades. I have already described how this may be done by a double process, but I shall now describe the means of doing it by a single process. I take a sheet of sensitive calotype paper and expose it to daylight until I perceive a slight but visible discoloration or browning of its surface—this generally in a few seconds; I then dip the paper into a solution of iodid

of potassium of the same strength as before, namely: 500 grains to one pint of water. This immersion apparently removes the visible impression caused by the light. Nevertheless, it does not really remove it; for, if the paper were to be now washed with gallo-nitrate of silver, it would speedily blacken all over. The paper when taken out of the iodid of potassium is dipped in water, and then lightly dried with blotting-paper. It is then placed in the focus of a camera obscura, which is pointed at an object; after five or ten minutes the paper is withdrawn and washed with gallo-nitrate of silver and warmed as before directed. An image will then appear of a positive kind, namely: representing the lights of the objects by lights, and the shades by shades. Engravings may be very well copied in the same way, and positive copies of them obtained at once — (reversed, however, from right to left). For this purpose a sheet of calotype paper is taken and held in daylight to darken it, as before mentioned; but for the present purpose it should be more darkened than if it were intended to be used in the camera obscura; the rest of the process is the same. The engraving and the sensitive paper should be pressed into close contact by screws or otherwise, and placed in the sunshine, which generally effects the copy in a minute or two. This copy, if it is not sufficiently distinct, must be rendered visible and strengthened with the gallo-nitrate of silver, as before described. I am aware that the use of iodid of potassium for obtaining positive photographs has been recommended by others and I do not claim it here by itself as a new invention, but only when used in conjunction with the gallo-nitrate of silver; or, when the pictures obtained are rendered visible or strengthened subsequently to their first formation. In order to take portraits from the life, I prefer to use, for the object-glass of the camera, a lens whose focal length is only three or four times greater than the diameter of the aperture. The person whose portrait is to be taken should be so placed that the

head may be as steady as possible, and the camera being then pointed at it, an image is received on the sensitive calotype paper. I prefer to conduct the process in the open air, under a serene sky, but without sunshine; the image is generally obtained in half a minute or a minute. If sunshine is employed, a sheet of blue glass should be used as a screen to defend the eyes from too much glare, because this glass does not naturally weaken the power of the chemical rays to affect the paper. The portrait thus obtained on the calotype paper is a negative one; and from this a positive copy may be obtained in the way already described. Care must be taken to obtain paper of a very fine and even texture, and perfectly free from all foreign matter in its substance, which would cause blemishes in the picture. The best kind of paper is that called blue-wove post, and each sheet, preparatory to its being used, should be carefully examined before a strong light, and those sheets rejected in which any spots or uneven texture is observed.

“This calotype paper is so exceedingly sensitive to the influence of light that very beautiful copies of lace, feathers, leaves, pictures or ancient writing may be made by the light of a common gaslight or argand oil lamp. Merely press the article to be copied against a piece of the prepared paper with a sheet of strong glass, and expose them to the light about four or five inches from the flame for the space of two or three minutes.”

From these methods photography started on its successful journey into new realms, and along untrodden paths of discovery and improvement, and it is no small pleasure to those who have kept in touch with these developments to recall the early processes, and in doing so can easily trace how the foundation was laid of all that has followed.

PETER DOW.

DON'T forget the fourth historical competition closes on December 31. In this you have a chance to show your fine technical skill.

THE PHYSICAL DEVELOPMENT OF

P. O. P.

The following abstract of an article by Herr Schmidt, which appears in "Photographische Kunst," opens up new fields for experimentalists in this direction, as suggestions are made which are, so far as we are aware, distinctly novel.

An acid hydroquinone developer will give a range of tones from red to olive green, but blue and violet are not easy to obtain by mere development. An alcoholic solution of metol will also give excellent results; it works quickly and keeps well, but is rather more costly than pyro or hydroquinone. The metol is used in a ten per cent alcoholic solution, or rather mixture, for the whole of the metol does not dissolve, and the solution must be shaken up before dilution with water in the proportion of 1:100, which forms the actual developer. This gives a dirty greenish-brown tone, and very quickly causes general stain; if, however, 20 to 30 drops of a twenty per cent chrome alum solution be added to every 100 parts of the metol developer, the whites are kept clean. The addition of a little glacial acetic acid gives a greenish black, which, with continued use of the developer and very short insolation, turns to black-brown. Instead of the glacial acetic acid, acetate of soda may also be used with equally good results.

Citric, oxalic and tartaric acids added to the metol developer give each its special tone, ranging from brown to reddish yellow. Citric acid gives excellent brown tones with a shade of rose, which can not be obtained with any toning bath. Oxalic acid also gives brown tones, and prolongs development. Chrome alum also acts as a restrainer, and the tone is pure brown and the whites clean, and in the presence of tartaric acid it acts in the same way, and the tone is yellowish brown, which becomes darker the longer the development continues.

The possible combinations between the various acids are, of course, innumerable, but a mixture of two acids

does not apparently give a tone which may be called the mean of the two, but it always has a tendency to reddish-yellow.

Although an acetate gives the same results as acetic acid, it does not follow that the salts of the other acids will act in the same way — as, for instance, the oxalate of sodium does not act in the same way as oxalic acid, as it gives greenish tones. In conjunction with citric acid it gives an excellent pure olive tone, however. Phosphates act in the same way, though, as phosphoric acid, and cause general fog, which is not prevented by chrome alum.

Traces of bichromate in the metol and acetic acid developer give beautiful bright brown tones, but without the acetic acid there is no developing action. Phosphoric acid, if used in a fifteen per cent solution, added to the acetic developer, converts the olive tone into green. Its action is peculiar, as it appears to fog the whole print, and yet develops the detail with the same contrast as the other developers; it may therefore be useful for artistic effects.

The tables shown on pages 372 and 373 give a summary of the results attainable, though there are other factors that influence the tones.

Pyro stands midway between metol and hydroquinone, not only as regards the rapidity of development, but also as regards the variation of tone by certain additions. The use of a very dilute pyro solution 1:1000 gives, according to Liesegang, a beautiful chocolate brown that approaches warm black in the shadows, but this was only found to be the case with prints that were fairly strongly printed; if but a faint impression was obtained, a yellowish-brown tone was obtained. Unfortunately the tendency to fog is a great disadvantage with pyro. Acetic, citric and tartaric acid do not alter the tone, but restrain development and prevent the fog. Good bright brown tones are obtained with a bath of pyro, acetic acid and chrome alum. Oxalic acid plays a noteworthy part; in conjunction with pyro there is no development, and in conjunction with

other substances it does good service as a restrainer.

Potassium bichromate and phosphoric acid can be used as accelerators, the addition of even a few drops of a saturated solution of bichromate accelerates considerably. Both give green to olive tones, but plenty of fog. If to the bath is added from ten to twenty times the quantity of oxalic acid as there is bi-

chromate, beautiful sea-green tones result. Substituting acetic for oxalic acid, olive tones are given; the same applies to citric acid, which gives a tinge of rose. Acetic acid, in conjunction with a little bichromate and pyro, gives chocolate-brown tones, such as are unattainable with pyro, but as this tends to fog, it is advisable to add some citric acid.

ORIGINAL DEVELOPER 50 CCS. 1:1000 METOL SOLUTION.

Additions.	Develop- ment.	Tone.	Remarks.
1. Glacial acetic acid, 3 ccs..	Quick.	Olive.	Addition of 5 ccs.; 1:20 chrome alum solution gives more brilliant tone. Excellent.
2. Lead acetate.....	"	"	Nitrate may be used. Advisable.
3. Citric acid (1:5), 5 ccs....	Medium.	Brown.	As No. 1. Excellent.
4. Oxalic acid sat. sol., 10 drops	Slow.	"	Worth trial.
5. Tartaric acid sat. sol., 3-5 ccs.	"	Yellow or yellow brown	
6. Acetic acid, citric acid (a little); chrome alum	"	Brownish red. .	As No. 1. Very commendable.
7. Citric acid (1:5), 5 ccs.; sodium oxalate.	Medium.	Greenish olive ..	Excellent.
8. Bichromate (1:50), 2-3 drops	Quick.	Brown.	Commendable.
9. Phosphoric acid (15 p. c.), 10 drops; chrome alum..	Very quick.	Dark green.	Sodium phosphate can be used (for artistic work).

ORIGINAL DEVELOPER 50 CCS. PYRO SOLUTION 1:1000.

Additions.	Develop- ment.	Tone.	Remarks.
1. Nil.....	Medium.	Yellow brown ..	The same with 5-10 drops of acetone added.
2. Glacial acetic acid, 3 drops	Slow.	"	The same with citric acid added.
3. Glacial acetic acid, 4 drops; chrome alum 8-10 drops..	Medium.	Bright brown. ..	Commendable.
4. Glacial acetic acid, 5 ccs.; citric acid sol. (1:5) 5 ccs.; Pot. bichrom. (1:50), 3-5 drops	"	Chocolate brown	Very commendable.
5. Glacial acetic acid, 10 drops; Pot. bichrom., 1:50, 3 drops	Very quick	Olive	Commendable.
6. Citric acid sol. 1:5, 5 ccs.; Pot. bichrom., 1:50, 3-5 drops	Quick.	Greenish olive ..	Very commendable.
7. Oxalic acid sat. sol., 5 ccs.; Pot. bichrom., 1:50, 3-5 drops	"	Sea-green.	Commendable.
8. Copper citrate sol., 5 ccs..	Medium.	Olive.	For artistic work.

ORIGINAL DEVELOPER 50 CCS. HYDROQUINONE SOLUTION 1:100.

Addition.	Develop- ment.	Tone.	Remarks.
1. Nil.....	Very slow.	Yellow brown ..	
2. Acetone, 5 drops:.....	Slow.	Brown.	More acetone pure browns. Commendable.
3. Pot. bichrom., 3 drops...	"	Bright brown. ..	Wash before fixing.
4. Pot. bichrom, 6-10 drops; citric acid sol., 1:5, 10 ccs.	Very slow.	Dark carmine...	For artistic purposes.
5. Phosphoric acid (15 per cent.), 3 drops.....	Slow.	Brown	Very commendable.
6. Phosphoric acid, 20 drops	"	Gray green	" "
7. Copper citrate sol. 10-15 ccs.	"	Olive.	Chrome alum gives greater brilliancy. Very commend- able.

To the pyro developer some copper and citrate solution, as used for toning bromids, was added, the actual composition being:

Copper sulphate 10 grams
Potassium citrate 50 grams
Water 1,000 ccs.

This gave an exceptionally artistic rendering in olive which was accom-

panied by a slight fog. The pyro stock solution was a six per cent aqueous solution with the addition of 40 drops of acetone to keep it. For hydroquinone a ten per cent solution was used as a stock solution, and some acetone was added to make it keep. When a print developed with the normal developer — that is, 1:100 — and fixed, the tone



V. Burnett,

GIRL AND GLOBE.

New York.

SECOND AMERICAN SALON.

obtained was a yellowish-brown, with the acetone a warmer brown was obtained. Alcohol may be used instead of water. Citric and acetic acids and their salts produced no difference. Bichromate gives brown to dark-green tones, but very little must be used, otherwise the prints must be washed before fixing, otherwise the traces of bichromate in conjunction with the hypo will act as a reducer. The longer the print is in the bath — that is to say, the fainter the original impression — the more the tone approaches chocolate-brown; but there is at the same time slight fog. Very beautiful dark carmine-red tones are obtained if the quantity of bichromate is increased, and plenty of citric acid used; the print must be only faintly printed and the development may take ten minutes.

If phosphoric acid is added, the tone varies according to the quantity used; a few drops give brown tones, with more a grayish-green, and finally an olive tone is produced; if a lot is used a vigorous dark-green peculiar shimmering precipitate is produced. Small additions of acetone and bichromate hasten the development.

The addition of the copper-citrate solution gives excellent results, and the tone is olive, and is clearer with the addition of chrome alum.

The above remarks apply mainly to gelatino-chlorid paper only, half-printed under a normal negative. Faintly printed proofs give darker tones, tending toward green; strongly printed prints give brighter colors. A deeply printed proof gives more contrast than a weakly printed one, and concentrated developers tend to give darker tones, dilute developers brighter ones, and the latter work more softly than the others.

Some of the statements advanced by the author seem somewhat curious, as, for instance, when he says that the more developing solution used the softer the image, which he explains is that the nascent silver has more opportunity to be suspended than when only a little developer is used.

Collodio-chlorid papers, as a rule, give practically the same results as the gelatin papers, only the tones are colder, frequently darker and less brilliant. The metol and alcohol developer with chrome alum gives excellent brownish-black results. Not more than 50 ccs. should be placed in a 9 by 12 dish at once, and not more than three or, at the most, four prints should be developed therein; otherwise the precipitate of silver becomes too thick. Liesegang suggested the use of a fish glue to prevent this precipitation, but the author states that a dirty dish, such as has been used for developing and fixing, and only superficially cleaned, may be used for this process, and that the nascent silver is then deposited on the dirty places in the dish.

After development the prints may be either rinsed or transferred direct to the fixing bath, and an acid fixing bath is an advantage.

IMPROVING BROMID PRINTS.

It frequently happens, says Mr. Sylvester in *The Bromid Monthly*, that bromid or gaslight prints which one wants to have black turn out rusty or green. Instead of throwing them away they can be improved by toning with gold. The solution for this purpose is made of

Ammonium sulphocyanid.	30 grains
Gold chlorid	2 grains
Boiling water	4 ounces

Now the proper way to make this is to dissolve the sulphocyanid in half the water and the gold in the other half and add the gold gradually to the sulphocyanid, stirring all the time. It will be ready for use as soon as cool. The print after fixation must be well washed, and should then be squeegeed face up on a sheet of glass, and the above gold bath brushed over the surface with a broad and flat camel's-hair brush till the color of the image is satisfactory; a thorough washing completes the operation.

FIRST ATTEMPTS AT PICTURE- MAKING.

AN ARTICLE FOR THOSE WHO AIM AT PICTORIAL
EXPRESSION WITH THE CAMERA.

All of us start our photography with the intention, realized or unconscious, of using the camera to record facts, to make presentments of faces, buildings,

phy have been mastered. So they will, but we shall be then only on the very threshold of the highest kind of photography, and it is only by realizing this that we can hope to improve. Any one of ordinary capacity, after a little training, can take such a photograph of a person's face or of a church front, as I



Eugene R. Hutchinson,

Danville, Ill.

SECOND AMERICAN SALON.

trees, and so on; and in those early days we are very pleased if we can get such records, clean and sharp, so that each hair, or freckle, or leaf is distinct upon negative and print. When our results, besides this, will be strong and of a good color, free from spots and blemishes, in all probability we shall anticipate that the intricacies of photogra-

have described. How many could take a camera and secure a photograph which will record not the creases of a dress but the kindly disposition of its wearer, not the blades of grass in a field but the breeziness of the wind that blows across it, not the blocks of stone in a column but the solemnity and grandeur of a cathedral? These are the problems

which lie before the worker who has managed to get over the darkroom rash, exposure measles, and other ills of his photographic childhood.

There are plenty of photographers who recognize that this work is not within their power and is not to their taste. Not only do they not attempt pictorial work, but they can not see the results when others have got them. It is just as well to recognize the direction in which our inclinations and abilities lead us, and face facts frankly. Nothing is gained, but valuable time lost in striving to do we do not quite know what and in aiming at a mark which is out of sight. There is plenty for those to do who care not for pictorial photography.

But for those whose tastes lead them toward it, who is to indicate how such intangible effects are to be secured? Take one of the simplest of subjects — A wet day in town. Remember: We do not want to read every word of every advertisement on an omnibus, or to recognize who is passing on the other side of the road. We want to get the feeling of wetness, the moisture-laden air, the freshness which a shower leaves behind. How is this to be done?

The first and most important thing of all to remember is that we must photograph things not as we know them to be, but as they seem. That steeple seen in the distance is not rendered truly, if it appears in our photograph just as it would do if we were close to it, except that it is on a smaller scale. If we got it thus, it would be every bit as wrong as if we got it bent in the middle or distorted by tipping our camera up. We see that steeple through perhaps a quarter of a mile of city air, laden with smoke and saturated with moisture, lit with the clear sunshine that follows rain, and we have got to get that air and smoke and moisture into our picture. It is not easy.

"Throw the steeple out of focus," some one suggests. That in itself is not going to do it. If we get the steeple crisp and sharp as we can see it perhaps with a telescope, and as a good lens may

be made to give it, we know that that is not how it appears, so that if we get it too sharp we shall lose our effect. But mere blur by itself will not give it. We have to get the tone of the steeple relatively to the things that lie much nearer the camera, and relatively to the sky that forms its background. Such detail as it possesses must only be given as seen, with all minor differences of light and shade veiled by the illuminated air, and with every edge and outline softened and rounded by the same agency.

To recognize our task is only one stage toward its accomplishment. If we photograph the scene straight away, taking care not to get the distant steeple too sharp, if we use an ordinary plate, we may get part of what we want. The chances are that the tones of foreground and steeple will be relatively correct, but the sky will be wrong as compared with the latter. If there is a good deal of mist about, we can get what we want, especially if we use an orthochromatic plate and a pale yellow screen. We shall lose a lot of the mist, but not all; and shall at the same time keep the sky right. This is, perhaps, the nearest we shall ever get by straightforward photography, and otherwise the shortcomings of the plate must be remedied by handwork during or before printing.

In the meantime there is the foreground to be considered. If we try and get everything perfectly sharp here also, we shall lose the substance by grasping at the shadow. Those reflections on the wet roadway, if they are not to come out as black and white masses or lumps, have got to be exposed for. Never mind if that cab in the distance moves a little and gets blurred. So long as it suggests a cab it will do. Then there is a brightness in the air, which can not be caught by a pale gray print, so we must remember that fact when we come to develop.

"How about exposure? And what stop should I use? And do you think pyro-ammonia or rodinal will give the best effect?" I can not say. I am a beginner, too, and do not mind admitting in confidence that I do not get the

effect. I try for once in a blue moon; but now and again, though rarely, like those cerulean lunar events, I do get it, and am, if not satisfied, at least encouraged.

So far, I have spoken of nothing but "atmosphere," as the painters call it, a difficult problem to deal with in paint,

on which we are most likely to get what we want, or at least to get negatives which do not call for so much handwork. Actual rain will be found very useful for the same purpose, but we must always remember that the negative will show us too much of the subject rather than too little.



Fedora E. D. Brown,

Grand Rapids, Mich.

ELMS BY THE RIVER.

SECOND AMERICAN SALON.

but still more so in photography, because the tendency of the lens and plate is always to sharpen and clarify the distance, until it no longer appears in the print as we see it, but rather as we might do if we had unlimited sight and could look through a perfect vacuum. To counteract this, a misty day is one

A color-sensitive plate and a screen are very necessary if there are white clouds and blue sky in our picture, and it is hopeless to attempt to get a true rendering of the sky without them. If we have merely a gray sky the ordinary plate will be better, because the color screen undoubtedly helps to rob the pic-

ture of atmosphere. A small stop does the same. We need only take a couple of negatives of a suitable subject from the same standpoint, focusing for the most important part of the picture, and using $f-8$ (or $f-6$ if we have it) for one, and $f-32$ for the other, to see what we lose when we try to get everything as crisp and sharp as optics can possibly make it.

The very first serious attempt at picturemaking should be made in the direction of atmosphere. It is not all, it is not even a very large part, but it is an essential. Let the picture suggest by its mere tones and variety of definition that it is not a representation of flat objects on a flat surface, but that it has depths and distances. Let us know that the far-off houses are far off, not simply because they are small, but because they look far off.

Much can be done by what is called "differential focusing," by arranging to have some parts sharper than others, but it is easy to overdo this and lose all texture in the attempt. Some things have to be reasonably sharp or they fail altogether; while others will allow of a very great deal of blur, and still not be offensive—in fact, they may even look quite sharp. We can do a great deal in the way of modifying tone values by working on the back of the negative with a stump and similar tools, but while it is easy to alter tones, it is extremely difficult to alter definition locally in this way. I have never succeeded in doing so at all satisfactorily. We can soften it all over, but not in any particular part, so that this is a thing which must be attended to at the moment of exposing, or not at all.

All said and done, our picture must be much more than a mere essay in aerial perspective, it must be decorative; but that is a large subject, and quite out of place in a short essay such as this. Let us be satisfied for the moment with the truth that in pictorial photography we set out to photograph things as they seem to us, and never as we know them to be.—*Photography.*

W. HEYWOOD.

HOW ONE PHOTOGRAPH GALLERY IS ADVERTISED.

For a number of years the Siegel-Cooper store, New York city, has had a photograph gallery upon its top floor, but until three years ago it had always been conducted on the bargain principle. The average price of cabinet pictures was \$1.50. Three years ago a change of management was made and the gallery put in charge of James L. Acker, who had been with Frederick and Dupont, well-known New York photographic portraitists. Mr. Acker set to work to raise the character of the gallery's patronage, and in a few months, by means of advertising and a general bettering of standards, had increased the average price of its product to \$3 per dozen, while portraits costing as much as \$10 are now made in what was formerly a department store adjunct.

In *Printers' Ink* for May 24 appeared an article on "Advertising for the Photographer," containing general principles so sound, in Mr. Acker's opinion, that he submitted specimens of his own advertising and consented to tell something about his methods in a field that has heretofore been singularly dormant in publicity.

"A photographer has one great advertising medium that costs him nothing at all," he began. "That is the privilege of putting his name and address on every picture he makes. A dozen photographs will ordinarily be distributed among at least eleven families. They will be preserved for years, and when their possessor wants photographs a common proceeding is to examine the pictures in his collection and take the address of the man whose work is most impressive. To use this advertising medium to the best advantage the photographer must do good work, first, and after that endeavor to attract the best class of trade, so his work and name will be known among the people who have the most money to spend.

"This gallery was formerly known as the Siegel-Cooper gallery, and the store's imprint appeared on all work. We adopted the name, 'The Benedict

Studios,' giving the gallery an independent standing. It is entirely separated from the store proper. A cheap class of work had formerly been sought, and this we set about to change also.

"It is a strange tendency that leads photographers into price competition when they advertise. Nothing could be

appears with a valued photo. Competition in prices has always been the advertising resort of cheap photographers. A favorite method is that of distributing coupons which entitle the possessor to a discount on a dozen portraits, or to a large portrait free. Methods of this character have lowered photographic



Henry Berger, Jr.

Portland, Ore.

A GOOD HOT MEAL.

more unfortunate than price competition in this business. For years and years the crayon enlargement man has traveled from door to door, lowering the artistic tone of photographic portraiture. Frequently his function has been assumed by the downright swindler who collects a nominal advance payment from unsuspecting persons and disap-

advertising to a level where cut prices or the price appeal stand for cheap work. So the thing to avoid first of all is the bargain argument.

"I wanted to reach a good class of people in advertising the Benedict Studios. I knew that artistic portraits could be made at \$3 a dozen. Newspaper advertising in New York city

covers too wide a field for my purpose, so the mailing list was adopted. Our first piece of literature was a booklet on 'Photography as a Fine Art.' This gave half-tone examples of good portraiture and dealt with the personal equation in photography. This excerpt gives an inkling of its style:

In portrait photography it is, of course, highly necessary that all conditions be favorable—modern cameras, properly arranged skylights and ample studios and all the other various photographic paraphernalia play an important part in the final result. Yet, behind and above all this, is the skill of the artist. The artistic value of a photograph, its power to portray a likeness, to make you you, not only requires all the modern mechanical means, the greatest skill and experience, but those subtle, intangible qualities that lie down deep in a man's make-up and which we conveniently term the "artistic sense."

Many folks look upon the camera as a mechanical device which is simply to be "snapped" and that will always produce the same sort of picture. But how different will be two portraits made by the same camera but by different operators? One merely a picture—cold, flat, lifeless; the other glowing with a personality, suggestive in pose, or with possibly some pleasing and familiar emphasis of feature—a masterly use of light and shadow; in short such a true "characterization" of the individual that under the recognition of your friendly eye it seems fairly to take life. And this is photography—photography as a fine art.

"Views of the gallery, reception and dressing rooms were also printed, with something about enlargements and harmonious frames. Fifteen thousand copies were mailed to names taken from the Elite Directory and telephone book. In the former I selected names of people who would not be likely to patronize the more expensive famous galleries in New York, and in the telephone book those of people living in the suburbs. The returns were excellent. People came and brought children to be photographed, and when they were once in the gallery we made portraits of the mothers and all the children, depending on artistic work to sell several times the number of pictures that were wanted. This is where the value of advertising lies in the photographic field, for the photographer's chief difficulty is to get people into his gallery. Once under the

skylight, with a skilled, tactful operator, it is easy to secure orders for several dozen portraits—provided, of course, the bargain-hunting element has been eliminated. Last week, for example, a mother brought a baby in to have a single picture made to be sent to Europe. One of our operators photographed two older children while the mother was in the dressing-room, then photographed the baby and herself. The result was an order for five dozen pictures. The advertising photographer should never limit the number of exposures if he knows his business.

"Children are the key to the whole family in photographic advertising. Get a child into the gallery and the family follows. For this reason our second booklet was entitled 'Photographs of Childhood.' It gave examples of portraiture in this branch of work, and dealt almost wholly with the elements of personality, sympathy with the little sitters and the need for portraits at a time of life when children are growing and changing. Here are some selections:

It might be said that the successful photographer of children, like the poet, must be born. Certain it is that no amount of technical training can take the place of that natural sympathy that must exist between the man and the child, if the highest ideals of portraiture are to be realized. Children act by impulse and intuition, and are alike quick to repel and respond to the influence of the photographer. A child knows intuitively those who like him, and to them only will he be himself.

The aim of the photographer should be first to make a *portrait*. And a portrait may be defined as a picture which portrays those fleeting and subtle qualities of expression, gesture and pose so true to life—that you forget the picture and see, instead, the real child.

The twinkle of the eye, the wistful shyness, wholly of babyland, the droll pucker of the mouth, the smile, the thoughtful brow, the sweet gravity—such as no other child shows in just the same way—one or all, call out instant recognition of the heart as well as the eye.

Children's photographs are really a record of their lives. The years go fleeting away so fast that even a mother can not carry in her memory the changes that take place in her boys or girls. What a joy to feel that one may look upon them in after years as they were in babyhood or boyhood.

"Ten thousand of these booklets have been sent out this summer to names similar to those on the first mailing list. It was designed partly to stimulate business in the quieter summer months, but chiefly to bring fall and winter work. Results have already become noticeable, though the mailing was finished only three weeks ago.

"Another valuable bit of advertising was our portrait exhibition, held last September. I sent to about fifty famous photographers in this country and Europe, asking for specimens of their work for exhibition. Some fine portraits were loaned by American and Canadian photographers, while in London, Paris, Rome, Berlin and other continental cities pictures were purchased outright. We made a specialty of portraits of famous persons, such as the King and Queen of England, the Kaiser, Emperor of Austria, Madame Bernhardt, Ellen Terry, President Loubet, Queen Wilhelmina and others. With this work was exhibited about as many portraits of our own. There were five hundred altogether. Invitations were mailed and the exhibition lasted two weeks. Concerts were given in the gallery daily, and the show brought us a number of good notices from New York dailies. Perhaps nothing that we have done has been so effective in giving the Benedict Studios an artistic standing, demonstrating that good work could be done in a department store gallery, and at reasonable prices.

"This exhibition attracted the attention of a photographer in Scranton, Pennsylvania, and he asked for the loan of our pictures. Those by European men were sent, and he secured other portraits from American photographers. His exhibition, he told me, was perhaps even more successful than ours, because he does business in a smaller community. I can readily see how such a show would make a more permanent impression in a smaller city. But even in New York, with its endless distractions, the effect was by no means temporary. Visitors remembered it and we trace work to the exhibition every day. This



H. W. Minns, Akron, Ohio.
GOOD MORNING!
SECOND AMERICAN SALON.

invitation will be useful to any one who gets up something similar:

AN INTERNATIONAL EXHIBIT OF PORTRAIT
PHOTOGRAPHY.

You are cordially invited to attend the International Exhibition of Portrait Photography, which will open at the Benedict Studios (seventh floor Siegel-Cooper building), Monday, September 26, and continue for two weeks. At this novel and interesting exhibition will be shown the best examples of camera portraiture, by the leading photographers of Europe and America. Not only will an opportunity be afforded to view the work of celebrated photographers from nearly every part of the world, but the collection of portraits, in themselves, will be noteworthy. More than four hundred portraits of famous people will be exhibited, including members of the royal families, as well as distinguished Americans. Music daily.

"On inside pages of this invitation were given lists of exhibitors and portraits of famous people. I believe that an exhibition confined to one's own work is as effective, and even better advertising, though the work of the best men in the photographic world

has a drawing power that is very desirable. Then, when a photographer is not afraid to let his own work stand side by side with the best product of America and Europe he assures his own artistic standing.

"One mistake common to photographers is that of having barnlike operating and dressing rooms. The average operating-room is seldom carpeted, though carpeting in green or red is essential to give warmth and cheeriness and a homelike atmosphere that puts the sitter at ease. Another valuable form of indirect advertising is the woman operator for children and women sitters. Dozens of persons come to our studios and ask for Mrs. Bundy, our operator, who is not only a specialist in children's portraits, but has also been very successful in photographing men. Women have a certain confidence in the woman operator, especially where children are to be photographed, because children yield themselves to a sympathetic woman and better portraits result.

"Men might as well be left out of the photographer's advertising plans altogether. A man visits the gallery in charge of his wife, or because he was sent by her. If your advertising brings the mother and children, the father will follow in course of time. I hope it is not necessary to add that by far the greater proportion of our booklets and invitations to exhibitions go to women.

"Newspaper advertising might be handled on the lines of our booklets—that is, educative talks about artistic portraiture. It would pay in smaller cities, I think. Here in New York I have always thought that newspaper advertising would necessitate special prices, and have not gone into that medium. The booklets bring us all the work we can handle comfortably. One important point for the advertising photographer is to limit his business, so that his studio will never be crowded. The aim should be to attract the best class of patronage and always have leisure for each sitter."—*Printers' Ink.*

JAS. H. COLLINS.

PREPARING THE STUDIO FOR THE WINTER.

With the first early signs of winter some difficulties may already have been experienced in preserving the tightness of the studio roof. During the summer months the putty dries and becomes brittle, cracks and in places leaves the glass, and, as a consequence, the water finds its way in. Of course, to remedy this evil the services of a glazier must be invoked; but a few hints as to how he should proceed may be useful.

OLD-FASHIONED STUDIO ROOFS.

The most troublesome roofs to deal with are those constructed in the earlier days when it was erroneously considered that the more glass there was in the studio the shorter would be the exposure required. With the above idea the sash bars were frequently made so slight that they were scarcely strong enough to bear the weight of the glass they had to sustain without bending, and with a heavy wind they would give considerably. We have been in a studio of this description in a heavy gale and seen the roof bend in to an almost alarming extent. Under such conditions there need be little surprise that, after a hot summer the over-dry and non-elastic putty should crack and separate from the glass. In such a case the first thing to do is to strengthen the sash bars, and render them rigid. This may be done by fixing inside and transversely a bar of T iron which is screwed to the sash bars; this by reason of the strength of the T-shaped bar will confer great rigidity. If the roof be large, two bars may be required. Having secured rigidity in the sash bars, we have a fair foundation to work upon. The old putty, wherever it is found to have cracked or separated from the glass should be hacked out and the parts painted, the paint being well worked in between the edges of the glass and the wood or iron as the case may be. When this is dry, or partially dry, new putty should be filled in, and the work receive a coat of good white-lead paint.

MAXIMS IN STUDIO REPAIRS.

The putty used is of importance. It should be made of whiting and good linseed oil with a little white lead, and not the putty of the oilshops. The addition of a little red lead is sometimes recommended; it makes the putty dry

doing his work properly. The fault is not, however, always his, for it may happen, owing to the slenderness of the sash bars, that his weight on the roof while finishing his work causes the old putty, which it was not thought necessary to remove, to crack away from the



J. H. Field,

Berlin, Wis.

MORNING WORK.

SECOND AMERICAN SALON.

quicker and harder; but it is a question if this is an advantage, inasmuch as it causes it, after a time, to become brittle and liable to crack if there happens to be any give in the sash bars. It is sometimes found — after the roof has been repaired — that water gets through it in places where it did not before, and often the workman is blamed for not

glass, and so occasion fresh leakage. It has before now been recommended to tar the sash bars instead of painting them, and we have known cases where this has been done with good success. Tar does not become so brittle as paint, particularly bad paint. While the men are on the roof it is a good plan to get them to clean the glass thoroughly, for,

as a rule, it is thickly coated with a yellow film of dirt from smoke. After the outside work has been completed it is well to give the inside of the roof sash bars a coat of paint. This will fill up any little points that may have escaped the outside treatment.—*British Journal of Photography*.

W. H. WALMSLEY.

Mr. W. H. Walmsley, the well-known optician, died suddenly at his home in Philadelphia, Sunday evening, October 22, in his seventy-fifth year. For nearly forty years Mr. Walmsley was engaged in the optical line, and recognized as an authority in microscopical and photographic work, his specialty being photomicrography. He was an active member of Jas. W. Queen & Co., in the early days of that concern. Later he associated himself with the well-known house of R. & J. Beck, London, and in a short time built up an extensive demand for that firm's product in the United States. His success in introducing the Beck lens is a matter of history among the stock dealers of this country. He afterward organized the firm of W. H. Walmsley & Co., and conducted a general optical business and also handled photographic goods on a large scale. He had recently been associated with Prof. John MacFarland in the Biological Department of the University of Pennsylvania.

Mr. Walmsley was a contributor to various scientific journals, among others the *British Journal of Photography*, *Photographic Times Annual* and *Photo-Miniature*. He was the founder of the American Microscopical Society and a member of the Royal Microscopical Society of London.

THE judges in the Burke & James Ray Filter Competition, R. James Wallace, Yerkes Observatory, and F. Dundas Todd, have announced their awards. The principal prizes fall to W. S. Rice, Stockton, California; Joseph L. Douglas, Columbia, Missouri (2); Will A. Hatch, Buffalo, New York; H. R.

Buck, Chicago; W. A. Bates, Mansfield, Pennsylvania, and Z. N. Barnes, Little Falls, Minnesota.

CHICAGO, Nov. 8, 1905.

Mr. F. Dundas Todd, Chicago, Ill.:

DEAR SIR,—We beg to announce that we have purchased the entire estate of James H. Smith & Co., which includes the good will, patents, trade-marks, machinery and tools, and that it is our intention to continue manufacturing the best products of that company.

Yours very truly,

BURKE & JAMES.

EDITORIAL TABLE.

THE ROCHESTER OPTICAL COMPANY have just placed on the market their new $2\frac{1}{4}$ by $3\frac{1}{4}$ "Premoette" camera, which sells at the popular price of \$5. The "Premoette" is a folding type and when closed measures only 3-16 by $1\frac{7}{8}$ by $4\frac{1}{2}$ inches, making it one-third smaller than any other folding camera taking pictures of equal size. It has a very fine Meniscus lens fitted to automatic shutter of three variations of speed, made especially for this camera. The focusing manipulation is very simple, one having only to pull standard out to desired distance mark, where it catches automatically. We recommend it to those desirous of purchasing an up-to-date camera at small cost.

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